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PAPER TRADE JOURNAL

PAPER
THE MAGAZINE OF PAPER INDUSTRY
Is Combined with Paper Trade Journal

Vol. LXXX. No. 10 NEW YORK AND CHICAGO, MARCH 5, 1925 { Per Annum, $4.00 / Per Copy, 10 Cents

PROMPT AND FUTURE

KRAMFORS AA

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BLEACHED and UNBLEACHED

SULPHITES

KRAFT PULPS

GROUND WOOD

NORRONA

PULP STONES

PERKINS-GOODWIN CO.

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NEW YORK

PAPER

PRINTING PAPER

of

EVERY DESCRIPTION

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., INC.

LESLIE R. PALME' PRESIDENT — GEO. S. MACDONALD VICE-PRESIDENT & TREAS — F. K. HOPPIE SECRETARY

10 EAST 39TH ST. N.Y. U. S. A

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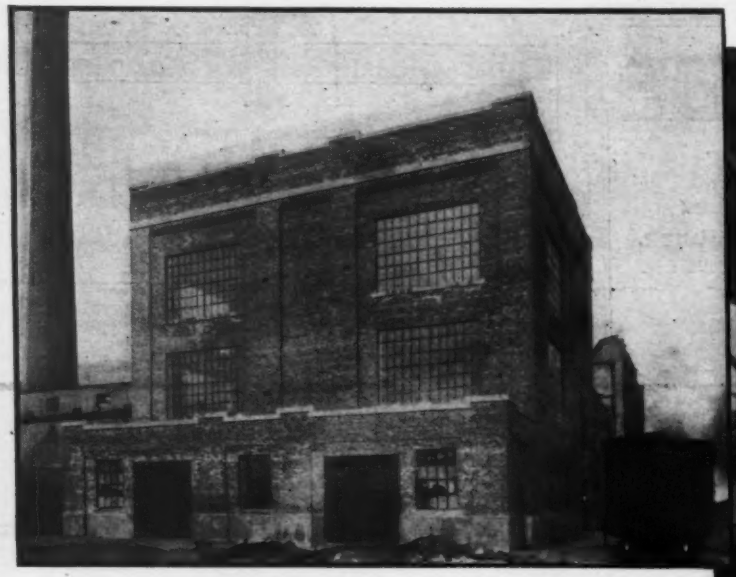

Exterior and interior of the boiler house, constructed by The Austin Company for the Continental Paper Company, Bogota, N. J.
KARL A. LEFRON, *Consulting Engineer*

From East Coast to West Coast

THE paper mill projects now under way by The Austin Company spread from the Atlantic to the Pacific. On the East Coast at Bogota, New Jersey, and on the West Coast at Spokane, Washington.

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On the West Coast Austin has just been awarded the contract for new construction for the Inland Empire Paper Co., at Spokane, Wash.

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Algonquin Paper Co.
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PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. LXXX. No. 10 — Thursday, March 5, 1925

The Magazine of the Paper Industry

Canada Not Likely to Adopt Pulpwood Export Tax

Government Not Anxious to Incur Animosity of Farmers and Students of Political Situation Believe Coming General Election Will Block Tax Proposition—Fixed Valuations Given St. Maurice Paper Co.—Big Fight On Over Developing the Water Power at Carillon Falls—Eminent Engineers in Montreal Strongly in Favor of Project.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., March 2, 1925.—Close students of the political situation at Ottawa are agreed that there is very little likelihood of the Government at Ottawa, adopting the proposal to place an embargo or export tax on pulpwood, and there are certainly no indications whatever that such a policy will be adopted. Apart altogether from other aspects of the question, the fact that there is a general election in sight is in itself enough to make the Government very chary of doing anything which would alienate the sympathy of a large number of electors in the rural districts.

The Government, being Liberal, with a strong admixture of the Progressive, or Farmer, element, does not expect much support from the Protectionist classes, but must rely largely on the farmer vote. It seems to be the settled policy to make as strong an appeal to the farmers and settlers as possible. The opinion is expressed that if an embargo or export tax were seriously considered, the Progressives of the West would come to the rescue of the settlers in the northern portions of Quebec and Ontario, and it is well-known that the Government has no desire to incur such opposition.

Cannot Square Farmers

To put on an embargo or export tax and exempt the pulpwood cut by farmers on their own lots, would not help the situation, because many farmers earn good money in the winter when they would otherwise be idle by cutting pulpwood on freehold timber limits belonging to other interests.

The Opposition speakers in the House of Commons have consistently supported either an embargo or an export tax, but as members in Opposition cannot bring in any measure to effect fiscal changes, their advocacy of an embargo or export tax amounts to no more than an expression of opinion. Meanwhile a most persistent and determined campaign, involving a considerable amount of advertising, is being carried on against an embargo or tax by the Canadian Pulpwood Association, of which Ralph P. Bell, of Halifax, N. S., is the moving spirit.

Power Fight in Montreal

There is a big fight on in Montreal over the question of developing the water power at Carillon Falls, on the Ottawa River, about half way between Montreal and Ottawa. The National Hydro-Electric Company, which proposes to develop this power, is headed by E. A. Robert, formerly president of the Montreal Tramways Company. He has just announced that he has completed arrangements with New York and Boston financiers by which $50,000,000 have been made available for the development. Already half a million dollars have been spent on the preliminary work, and construction of the hydro-electric plant for the development of 400,000 h. p. will start immediately on authority being received from the Federal Government. One outstanding condition in connection with the development is that the Government shall grant a 25-year license for the export of 300,000 h. p., leaving 100,000 h. p. for home consumption. At present the Federal Government only grants yearly licenses for the export of power.

Some Strenuous Opposition

The scheme is being strenuously opposed by the present power monopoly in Montreal, namely, the Montreal Light, Heat and Power Consolidated, with which the Shawinigan Water and Power Company is closely allied. The contention is that if this power is allowed to be exported under a long-term license, domestic users may find a shortage of power for their own use in the future. Incidentally the Montreal Light, Heat and Power Consolidated already exports a considerable amount of power from its Cedar Rapids plant, but under a yearly license.

The statement has been made that this Carillon project is the key to a super-power system in which hydro-electric properties in Quebec and New England would be co-ordinated—a plan which involves close to $50,000,000,000 of properties, and would call for grouping by territorial sections, each unit of which could help the other in an emergency.

Opinion of Engineers

A number of eminent engineers in Montreal are in favor of this Carillon project. They argue that the available power in Quebec and Ontario is such that under no conceivable conditions could there be a shortage in Canada, while if development were proceeded with to meet the market in the United States, it would help considerably in developing prosperity.

Paper Firm Given Fixed Valuation

The City Council of Cap Madeleine, near Three Rivers, Que., has come to an agreement with the St. Maurice Paper Company by which in exchange for a fixed valuation of its plant for a period of twenty years, the company agrees to pay immediately its municipal taxes, renouncing the exemption to which it was entitled until 1935.

The valuation was fixed at $2,500,000, and beginning this year the city will receive from the company taxes amounting to $30,000 annually. The same amount will be paid to the school commission, which has been receiving $17,000 annually. The agreement will have to be ratified by the Legislature.

Howard Smith Paper Mills Profits

MONTREAL, Que., March 2, 1925.—The Howard Smith Paper Mills, Ltd., for the year ended December 31, 1924, reported operating profits of $717,927, against $767,377 in 1923.

Improved Weather Helps Philadelphia Paper Trade

Coarse Papers Show Most Marked Betterment But Fine Papers Also Have Slightly Better Demand—Sylvester S. Garrett Thinks Europe is Preparing for Keener Competition—Importations of Wood Pulp Show Increase—Daniel I. Murphy, Inc., Distributing Raw Materials.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., March 2, 1925.—With the improved weather conditions the paper trade, began to take on a more lively business attitude. While the most noted improvement was in the coarse paper division there was a slightly better demand for the fine paper distributors although the market was far from the normal activity which should prevail at this time.

Ever since early February there has been a quieter trading era for the finer paper distribution in the Philadelphia markets. During the week, as the outdoors began to clear up, the dealers found their order files filling up with small orders of larger proportions. With the inclement weather the sales forces covering the Up State trade were assigned to indoor staffs and now that the betterment has set in they again will take to the road. The dullness in the printing trade, too, has been responsible for the unusually quiet times for this branch of the paper industry. The announcement of the vigorous campaign for the successful introduction of the Sesquicentennial and the appointment of its Director General, Col. Collier, has created a more hopeful outlook for the printing industry. It is believed now that the Sesqui Directors have settled down to an aggressive campaign for its accomplishment in 1926 that there will be a greater demand for all kinds of printed matter tying up with its activities and that of the industrial life of the city. Prices have been firmly maintained.

Coarse Papers Firming

With the more active demand for all grades of coarse papers there has been a stiffening in the prices of Krafts, fibers and the firming of the tissue market. Good grades of Kraft now are to be had at ¼ cent higher quotations while butchers fibers have been similarly advanced. Tissues which are more sought now that the Easter season is not far off are holding firmly after a long period of weakness. Toilets are notably weak, with generous mill offerings being made to the local dealers.

Stock dealers are filling orders that have come in within recent weeks but are not recording much new business from the mills. The only weak spot in the raw material lines is that of the dark cotton rags which are being bid for by the mills at prices below the range that dealers are able to obtain these grades for in either the foreign or domestic markets. Despite the low bids of the mills the dealers have been able to hold prices at the quotations of the past two weeks.

Mills on Schuylkill Reopening

The mills both in the Manayunk and the Up State territory, that border or depend upon the Schuykill River for water supply, after a three week shut down are again working full force, The Manayunk Mills were reopened about ten days ago but the Up-State Mills, where the high waters were unprecedented, had not been able to resume operations until this week. The river in the Pottsville section rose to a height of more than 21 feet, while the Manayunk District was within the 9 foot level.

Local Dealers on Mill Situation

Sylvester S. Garrett, head of the firm bearing his name, in commenting on the statements made in the column "Side Runs On The Paper Trade" by the Department of Commerce in its last Bulletin, in which comments were made on the large exportation of paper making machinery and their significance regarding the mill conditions in the United States, expressed his opinion that Europe was preparing for keener competition with the American industry and that the practical evidence was the large amount of equipment which that Spain, France, England, Germany and Austria. The majority of the equipment being shipped to European producers is used machinery which is being disposed of by American Mills that have been dismantled because of lack of business and where mill proprietors have been pushed for ready cash to meet obligations. Mr. Garrett believes that with the American equipment installations in the foreign plants at the increasing rate of exportation it will be a few months before the manufacturers across the seas will be ready to open up a keenly competitive market with our own producers. As soon as the Swedish lockout, which threw 15,000 men employed in 60 mills out of employment is suspended and mills again are ready to operate at the lower wage levels for which the lockout was instituted, Mr. Garrett, asserts that America will not only have a keen paper competitor but a low price product which will be hard to meet with our own high labor schedule. It is anticipated that there will be a temporary higher price quotation for Norwegian and other Baltic Papers during the lockout but that these will be displaced by the lower values just as soon as the Swedish mills resume and the other European manufacturers install their American machinery and are in full operation.

Philadelphia Gains in Pulp Imports

In a recent report on the importation of wood pulp through the port of Philadelphia, the Shipping Board stated that officials of Steamship Lines say progress has been made in attracting additional business here. Despite the severe depression which occurred during the past mid-year in shipping circles there was received in thees ports 268,321 bales and 3,958 rolls from foreign parts, while an additional 10,000 bales were received from Maine. It is expected that when the business of the past few months is summarized that there will be shown an importation of more than 50,000 bales. Prior to the opening of the Philadelphia Tidewater Terminal, woodpulp was sent here and discharged at various piers. Through a campaign to attract this traffic the port terminal company virtually has concentrated between 75 and 80 per cent of the total volume of wood pulp shipments at its piers. This was possible through excellent warehousing facilities and their convenience to railroad lines and the low rates of insurance made possible through the modern construction of the piers. The piers were constructed by the Government for the Quartermaster's Department during the war. That first shipment of wood pulp from Baltic Ports this year consisted of 4,000 which have been stored here and will be distributed as far West as Illinois.

Daniel I. Murphy Opens Pulp Department

Having been engaged in the paper stock business for more than a score of years the recently incorporated firm of Daniel I. Murphy, Inc., with officers in the Brown Building, now is venturing into another field of distribution of raw materials. There has been established a Pulp Department for the importation of wood pulp from Scandinavian Ports. The new department is under the management of Willard Heisley formerly connected with the importing firm of H. N. Hill & Co. The entire Eastern States will be canvassed by the new manager who will feature the supplying of mills with these Baltic imports. The Murphy Corporation now has four Departments, the Rag, Paper Stock, Import, Export and Pulp. For year the firm, founded by Daniel I. Murphy, who recently retired from the business, was engaged in the paper stock business on North

Delaware avenue. About three years ago upon the retirement of the founder the business was taken over by his son, John A. Murphy. Under the incorporation the following officers were elected to the firm:—President and Treasurer, John A. Murphy and Vice President and Secretary, William P. Kelly.

C. H. Morian with Cherry River Company

Clark H. Morian, for the past six years connected with the J. L. N. Smythe Company, dealers in coarse papers and specialties, has become associated with the Cherry River Paper Company, with Philadelphia offices in the Pennsylvania Building. Previous to joining the Cherry River Company, he was associated with the Smythe Company as general manager, having risen to that position after serving on its sales organization. No particular duties have been assigned to Mr. Morian with the Cherry River Company, manufacturers of sulphite papers, and he will act as its representative in various capacities. There has been erected in the Richwood, W. Va., Mills of the Cherry River Company a new bleaching plant and announcement has been made by the Philadelphia offices that the paper manufacturers are prepared to manufacture bleached papers with the beginning of April, along with the production of its sulphite products.

T. H. B. Smyth, General Manager

Following the severing of the connections of former General Manager Clark H. Morian with the J. L. N. Smythe, secretary and junior member of the firm. Secretary Smythe, is the son of J. L. N. Smythe, founder and present head of the company, and has been associated with the business for the past four years having joined the staff upon his graduation from college. The Smythe Company is one of the largest distributors of coarse papers in this section of the country and has large connections in Australia, New Zealand and with Cuban and South American countries. Recently its exporting and importing department was consolidated with the Paper House of Pennsylvania and later a new company formed to handle the business.

A Typothetæ Meeting on March 5

The dinner meeting to be held by the Typothetæ of Philadelphia on March 5 in the Poor Richard Grill Room of the newly opened Ben Franklin Hotel, will be of special interest to the trade because of the talk to be given by Watson Gordon, Advertising Manager of the S. D. Warren Company, Boston. Mr. Gordon will be the guest of the Typothetæ at this meeting held in furtherance of the Typothetæ Market Committee's plans. Having had practical experience in the printing industry where he learned the trade from the humble beginning of "printers devil" as a boy through all the phases of the art to its executive and managerial duties, and with the paper industry in association with the Warren Company, Mr. Gordon's talk, will be especially educational and helpful to the printers. He will explain the use of the "Printing Questionnaire," which has been helpful to printers in successful mail advertising.

U. S. Envelope Co. Changes

HOLYOKE, Mass., March 3, 1925.—R. V. Johnson, for the past four years manager of the P. P. Kellogg & Co. Division of the United States Envelope Company, has been appointed Assistant General Manager of the Company. He succeeds the late James B. Thayer who died January 27.

Mr. Johnson entered the employ of the National Envelope Company Division at Waukegan, Ill., in 1906 as stenographer and has risen step by step to his present position. He was assistant manager of that division for five years before coming to Springfield as manager of the P. P. Kellogg Division in 1920. He was born in Gowanda, N. Y. in 1889, son of A. T. Johnson. He is married and lives at 81 Longmeadow street.

R. L. Allison, who has been assistant manager of sales, has been appointed sales manager. He succeeds the late James B. Thayer who also held the combined position that is now taken by Messrs. Johnson and Allison.

Outline Recapitalization Plan

Following a meeting of the Board of Directors of the International Paper Company held last Friday, plans were announced for recapitalization for the purpose of acquiring the Riordon and Gatineau properties in Canada.

The plan proposes that the stockholders shall authorize a new 7 per cent preferred stock, exchangeable for the present 6 per cent preferred on the basis of share for share and $10 cash. It is further proposed to authorize a 6 per cent bond issue of $22,500,000, of which about $7,000,000 will be used in part payment of the Riordon and Gatineau paper properties in Canada, and $15,500,000 offered to the public. The authorized common stock will be increased from $20,000,000 to $25,000,000 under the provisions of the plan.

Plans for the acquisition of the Riordon and Gatineau properties are stated to be well advanced, and the necessary notices to the security holders of both companies will be issued in the near future. All the Riordon-Gatineau properties, together with the International Paper Company's Three Rivers mill, will be held by a Canadian subsidiary.

The subsidiary company so formed will own upwards of 12,000 square miles of timber limits in the Province of Quebec, together with the Kipawa and Hawkesbury bleached sulphite mills with an aggregate daily capacity of 300 tons, and the Three Rivers news print mill, with a daily capacity of 320 tons, now in process of enlargement to a capacity of about 500 tons a day.

The proposed bond issue will be secured by a pledge of the International Paper Company's equity in its Canadian subsidiary, as well as by a second mortgage on the American properties. It is estimated that after completion of the present financing plans the consolidated statement of the International and subsidiaries will show about $35,900,000 current assets and about $3,900,000 accounts payable, or a net working capital of approximately $32,000,000.

Holders of Riordon Pulp and Paper Company first mortgage and refunding 8 per cent bonds will receive for each $1,000 bond and accrued interest $1,000 in new International Paper Company 6 per cent bonds, and two shares of new 7 per cent preferred. Counting certain prior lien claims on the Kipawa mill, coming under this agreement, this will take $6,912,250 in bonds and $1,382,450 in 7 per cent preferred.

Riordon Pulp and Paper Company general mortgage 6 per cent bonds will receive for each $1,000 bond ten shares of International Paper Company 7 per cent preferred, on payment of $500 cash. Cash is payable in two instalments, May 15 and July 15, 1925. The whole of the ten shares will not be conditional on the cash payment. Each participating holder will receive three shares (deliverable in May and carrying dividends accruing from April 15) without any payment, and a transferable warrant entitling the holder to receive seven shares additional in July, carrying dividends accruing from July 15, on completion of the instalment payments. The 6 per cent holders will receive new stock to the amount of $3,987,500, against a cash payment of $1,993,750.

Archer Paper Co. Wins Tax Appeal

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 4, 1925.—The United States Board of Tax Appeals has rendered a decision in connection with the tax appeal of the Archer Paper Company. In their syllabus in this case the members of the Board say:

"A Corporation, by resolution of its board of directors, authorized its general manager, to fix the salaries of all employees. Held that action by the general manager fixing the amount of additional salaries, which action was communicated to the president of the Corporation during the taxable year, constituted a valid obligation of the corporation, to pay such additional salaries without formal action on the part of the Board of Directors, and the amount thereof is properly deductable from gross income in that year."

Warmer Weather Improves Paper Trade in Toronto

Mills Now Running at About 80 Per Cent Capacity—Power Company and Paper Mills Appeal From Court Decision—Barber-Ellis, Ltd., Makes Good Report for 1924—Reorganization Plans of Whalen Pulp and Paper Mills Almost Ready—Heavy Pulpwood Shipments Made.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ontario, March 2, 1925.—Business in the paper line continues to improve slowly with the advent of warmer weather and, while trade is not quite as good as it was last season at this particular time, the outlook is very fair. Mills are running to about eighty per cent capacity and salesmen, who have toured the province of late, state that the printing business is dull in some towns and very good in others.

There has been quite a drop in prices on shavings, book and ledger stock, manilas, news and scrap owing to a falling off in demand from outside sources. The local call is fairly strong. New cotton cuttings are in active requisition and prices are holding their own. In rag stock, there is almost a shortage in some lines. E. Pullan, of Toronto, who is known as the "Waste Paper King of Canada," has been awarded the contract for the coming year by the federal government at Ottawa for the collection of waste paper from the different departments. The total yearly output, including the throw outs of records, blue books, trimmings from the department of the King's printer and other sources, amounts to about one thousand tons.

The paper mills at Mille Roches and Cornwall, which are served by the St. Lawrence Power Company and usually come through a critical period about this season due to interruption of their power supply by reason of ice and snow, have so far escaped owing to the mild weather and will likely be able to run full time.

The pulp market is a little stronger and most mills are sold up for March. There is now no shading of prices on pulp.

Barber-Ellis Had Good Year

The annual meeting of Barber-Ellis, Limited, manufacturing stationers, Toronto, was held last week and the staff from various parts of the Dominion heard a good report on the operations of the past year. Business for the first nine months of 1924 was much better than the last three months when trade fell off considerably. Since the beginning of 1925, things have picked up considerably. The business was established in 1876 by John F. Ellis, the present head, and the late John R. Barber, veteran paper manufacturer. The company has large manufacturing envelope plants at Brantford, Winnipeg and Vancouver. The officers elected were: President, John F. Ellis, Toronto; Vice President, F. M. Ellis, Toronto; Secretary-Treasurer, H. Holt, Toronto; Directors, C. G. Ellis, Brantford; George H. Scott, Toronto; Wallace Murphy, Winnipeg; Garfield Graham, Calgary, and Lorne Graham, Vancouver.

Board Business Is Picking Up

The Strathcona Paper Company, Strathcona, Ont., manufacturer of all grades of box board, building and wrapping papers, reports that the past year, taking everything into consideration, was a fair one but was not what it should have been in the matter of tonnage. So far this year the mill has been running steady and the tonnage is greater. Several new lines in the box board trade are being turned out, and the company is operating both of its machines. Three boilers of 180 h. p. each and a new brick chimney, 90 feet high, have been added while in the beater room a 125 h. p. motor and two new, 1,500-lb. beaters have been installed.

Whalen Reorganization Scheme About Ready

Hon. T. W. McGarry, of Toronto, President of the Whalen Pulp and Paper Mills, Vancouver, B. C. which for a considerable time have been in the hands of a receiver, states that the first mortgage bondholders want a scheme of reorganization submitted and the proposal is now about ready. The assets of the company are estimated at five million dollars.

While the reorganization plan has not been made public it is believed that it provides that ultimately the company will go into news print production, for which there is a ready market all down the Western coast.

Pulpwood Shipments Are Heavy

Traffic in pulpwood over the C. P. R. lines has been very heavy during the past few weeks, according to word received from Sudbury and is continuing at the rate of one hundred cars a day. Shipments are coming from points throughout the district and as far east as Chalk river. Most of the wood is being cut by farmers and all of it is billed for points in the United States.

Notes and Jottings of the Industry

H. F. E. Kent, of Toronto, former President of the Canadian Pulp and Paper Association, who has been ill several weeks with grip, is again able to resume his duties as head of W. J. Gage & Co., manufacturing stationers.

Howard Smith, of the Howard Smith Paper Mills, Montreal, who has been spending some time in Switzerland, recuperating, has returned and was in Toronto this week on business. His health has been restored and he reports that business is slowly improving in the book and writing paper line.

Ernest Martin of the Interlake Tissue Mills, Toronto, and N. E. Wainwright, of the Provincial Paper Mills, Toronto, spent the past week in Montreal on business.

The Fink Paper Box Company who have been carrying on business on York street, Toronto, have discontinued.

The Airidal Company of Canada, have begun the manufacture on Carlaw avenue, Toronto, of milk bottle caps from paper board and are doing a good business.

R. I. Finlay, President of the Canadian Paper Trade Association, Toronto, has returned from a business trip to several towns and cities in Western Ontario and reports that business is improving, noticeably so in the Border Cities.

Fred L. Ratcliff, President of the Ratcliff Paper Company, Toronto, has been elected a director of the Canadian National Exhibition and left this week with Mrs. Ratcliff on a holiday trip to Bermuda.

Robert Morton, for many years office manager of Rous and Mann, Toronto, died last week following two serious operations. He was forty years of age and is survived by his wife and three children.

George C. Schneider, of the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., recently paid a visit of inspection to the Thunder Bay Paper Company, Port Arthur.

The next annual convention of the Canadian Weekly Newspapers' Association will be held in Winnipeg in June. The Executives met in Toronto during the past week to make arrangements for the gathering.

John Brassington, late of Port Arthur, Ont., has gone to Chicago to reside, where he intends to develop an inventoin of his own for use in pulp and paper mills.

A. Garrett of the Interlake Tissue Mills, Toronto, has returned from an extended business trip throughout the Maritime provinces.

MATHIESON System

Measured Units of Liquid Chlorine

ACCURATE loading of containers is probably more important with Liquid Chlorine than with any other industrial chemical. Approximate net weights are not sufficient; they should be such that each container may act as a measured unit of Liquid Chlorine.

Accuracy of this sort is the keynote in the design and operation of the Mathieson Multi-Unit Tank Car. It is the basic feature by reason of which this car assures the maximum of safety, economy and convenience in the transportation and use of Liquid Chlorine.

Each of the fifteen one-ton containers is refilled at our Works while being *individually weighed* on a Toledo Scale. To make doubly sure of the accuracy of the contents, all containers are allowed to stand for 24 hours after filling, until the Liquid Chlorine has adjusted itself to atmospheric temperature. The weights are then re-checked before the containers are returned to the Multi-Unit Car.

Users of the Mathieson Multi-Unit Tank Car are assured of an even fifteen tons in each carload, each ton container a measured unit of Liquid Chlorine, with none of the hazard due to possible overloading and with no shortages or uncertainty as to the quantity of material received or on hand.

The MATHIESON ALKALI WORKS Inc.
25 WEST 43rd STREET NEW YORK CITY
PHILADELPHIA PROVIDENCE CHICAGO CHARLOTTE

Deal Direct with the Manufacturer

Bicarbonate of Soda
Liquid Chlorine-Caustic Soda

EAGLE THISTLE PRODUCTS

Sesquicarbonate of Soda
Bleaching Powder-Soda Ash

February Business a Disapointment in Chicago

Dealers Report That Its Volume Was Not Up to That of January—Movement in Old Paper Market Slow—Peerless Paper Company Passes Into New Hands—Extensive Improvements at Plant of Champion Company Expected To Be Finished Within Ninety Days

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Illinois, March 2, 1925.—Reports of February business in this section carry a slight tone of disappointment. Dealers say that the volume was not up to January. To be sure February is a shorter month, but even allowing for that the month did not maintain the January promise. In terms of wholesale prices of 200 representative commodities, the dollar last week was worth 61.3 cents as compared with 1913. The average worth of the dollar in 1924 was 67.0 cents.

New Differentials

Dealers in the coarse division have been advised by a few mills that they have put into effect a differential on 25 and 30 pound kraft amounting to 25 cents a hundred. Likewise a differential has been made by some mills between rolls and sheets of butcher paper. This differential is also 25 cents a hundred. Dealers, while admitting that costs of production may justify these differentials, criticize the advisability of making them.

Old Paper Market Show

The old paper market is without marked change but the movement is slow. There is some conflicting gossip from the board mills. Some reports have it that the mills have enough business booked to carry them through the month of March and into April while other talk is that business booked last year for this year's delivery is getting well out of the way and that new orders are not forthcoming in a way that is at all satisfactory.

Peerless Changes Ownership

C. W. Davis, owner of practically all of the stock of the Peerless Paper Company, has disposed of his stock to H. G. Thoms, Henry Kirchhoff, Henry Gieseke, Herbert Kirchhoff, and A. Holmberg. The new owners took possession March 1. No announcement has been made as to the officials of the new organization. Mr. Davis will remain with the company in a sales capacity.

C. W. Davis has been in the paper business for thirty years. He started with the old firm of Roth Brothers in some capacity for which he was paid the enviable wage of eight dollars a week. From Roth Brothers he went to Thoms Brothers, one of whom was H. G. Thoms of the new organization, and later with Walter Sipple organized the Advance Paper Company. He later purchased Mr. Sipple's interest and in turn sold his interest to the Hanchett Paper Company. He then bought the Peerless Paper Company. Mr. Davis has been a hard worker during the thirty years he has been in the game and feels that he should get out from under the cares of management. His selling connection with the new owners of his old establishment will keep him from rusting out and yet permit him to have more time for his family and recreation.

The new owners are all from the old Thoms Brothers organization, which was a big harmonious family. They know the paper business thoroughly, as they are perfect team-workers, Peerless Paper Company will undoubtedly show great strides in the future. When Thoms Brothers was absorbed by another firm the boys found the old environment gone and when the opportunity presented itself to obtain control of the Peerless they were not slow in taking advantage of it.

Champion Buildings Near Completion

The large addition which Champion is building to its coating mill will be finished in about 90 days. It covers an area of 600 x 500 feet, or approximately six acres under one roof. A remarkable feature of the building is that, notwithstanding its vast area, there will not be a partition in that room. The improvement will give employment to about 250 more girls who will do sorting and inspecting.

Champion's new administration building will also be ready for occupancy in June. Besides the officials, the Champion Laboratory and the shipping department will be housed in the new structure. The building will cost in the neighborhood of $300,000.

The new finishing room of the Champion Fibre Company, Canton, North Carolina, a million dollar improvement, is now in operation. Book and sulphite bond can now be cut into sheets at the Canton plant. Heretofore the cutting had to be done at Hamilton. Shipments can now be made direct from Canton at an appreciable saving in freight to the dealer.

Personal Mention

Douglas Wray, of Douglas Wray Paper Company, and wife are sojourning for a month or so in Clearwater, Florida.

E. R. Jones of the Kansas City Paper House, Kansas City, Mo., was at his branch house at Oklahoma City, Okla., last week.

Jack Robinson of The Butler Paper Corporations, Detroit, Mich., visited mills in the Miami Valley last week.

Julius Butler, of Butler Paper Corporations, Chicago, and wife visited Hamilton, Ohio, and other Miami Valley points last week.

W. D. Randall, vice-president and general manager of Champion Coated Paper Company, visited his family at their winter home at Orlando, Florida, last week.

L. H. Bigelow, formerly with Seaman Paper Company, has returned from an extensive vacation spent in Florida and North Carolina.

Bob Butterworth spent last week end at the mill at Hamilton, and at Cincinnati.

R. B. Robertson, president and general manager, Champion Fibre Company, and wife have returned from a trip abroad.

G. E. Runcie, of Champion Coated Paper Company, was out of town a few days last week.

Template Paper Specifications

The American Paper and Pulp Association is in receipt of the following letter from Lieutenant Commander H. S. Jean of the United States Navy who is Laboratory Officer at the Brooklyn Navy Yard:—

"This office has been instructed by the Bureau of Construction and Repair, Navy Department, Washington, D. C., to draw up a tentative revision of Specifications 53-P-7 covering template paper, in order to eliminate the present chemical requirements.

"It is considered desirable to give manufacturers of this material an opportunity to offer such suggestions as they may deem essential to insure that the revised specifications will contain requirements under which satisfactory material may be purchased by the Government, and permit of competitive bidding by manufacturers of the material in question.

"Any comments or pertinent data you may be in a position to submit to this office will be greatly appreciated."

Executive Secretary P. Baker has forwarded to Lieutenant Commander Jeans a fund of matter to help him in his work.

then— he called the Boss

Bird Screens

"Yes, sir, we had a break on the driers. We were running 500 feet and the broke piled up pretty fast. I caught the tail end of the break, and sure enough, it was slime spots again. In the meantime, the screens plugged up."—

"Oh yes, a couple times a tour,—and here she is running all over the floor. By the time we get her free, the sheet is off weight and the hay piles up."

"Sure, the slime comes from the screen. Well, sir, I am glad to hear you say you are going to put in a couple Birds. They had 'em on the last machine I ran. No more flat screens for me."

BIRD MACHINE COMPANY
South Walpole Massachusetts

BIRD MACHINERY

7698

New York Trade Jottings

Warren B. Bullock was in Baltimore, Tuesday, on business in connection with the work of the Import Committee of the Paper Industry.

* * *

The Box Board Association will hold its next regular meeting on March 26 at the Commodore Hotel. The session will open at 10:30 A. M.

* * *

Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association, returned yesterday from a Southern trip on which he delivered several addresses.

* * *

The United Paperboard Company of 171 Madison avenue, has announced that holders of common stock of record March 21 will be offered the right to subscribe at $18 a share for common stock, par value $100, to the extent of 17 per cent of their holdings.

* * *

Frank W. Clarke, President of the Canadian Pulp and Paper Association, was registered at the Hotel Plaza Wednesday, Thursday and Friday of last week, sailing from New York on The France on Saturday for Europe. He will be abroad about six weeks.

* * *

The Twelfth Annual Meeting of the National Association of Waste Material Dealers, Inc., will be held at the Hotel Astor on Wednesday, March 18. The annual banquet will be held that night at the Astor. On Tuesday, meetings will be held by the Scrap Rubber, Waste Paper, Paper Stock, Foreign Trade, Woolen Rag Graders' and Metal Divisions. On Wednesday meetings will be held by the Scrap Iron and Cotton Waste Divisions.

* * *

The next meeting of the National Container Association is scheduled to be held at the Commodore Hotel, New York City, on Tuesday, March 24 and Wednesday, March 25. Meetings of the Sales Promotion, Standardization and Statistical Committees will be held at the Commodore at 1:00 P. M., Monday, March 23rd. A meeting of the Executive Committee will commence at 3:00 P. M. on that afternoon. The Commodore has assigned "Tavern Rooms A, B and C" for the committee meetings and regular sessions.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., February 25, 1925.—The Government Printing Office has received the following bids for 8,000 pounds of 21 x 32—16 No. 9 white record manifold bond paper: Whitaker Paper Company, at 40.7 cents; R. P. Andrews Paper Company, 39.85 cents per pound; Old Dominion Paper Company, 41.98 cents; Barton, Duer & Koch Paper Company, 40 cents; Esleeck Manufacturing Company, 35 cents; American Writing Paper Company, 36 cents; Dobler & Mudge, 40 cents.

The Government Printing Office has received the following bids for 38,500 pounds of 24 x 38—77, white laid antique book paper: Dobler and Mudge 17.64 cents per pound; Lindemeyr & Harker 13 cents; American Writing Paper Company 14.75 cents; Whitaker Paper Company 11.97 cents; Barton, Duer & Koch Paper Company 11.99 and 12.99 cents; R. P. Andrews Paper Company 15.3 cents; Mathers Lamm Paper Company 16.1 cents; Old Dominion Paper Company 14.83 cents; Reading Paper Mills 17.5 cents and 17.25 cents; Perkins, Goodwin Co. 18 cents and 18.25 cents; Paper Manufacturing Educational Association 21 cents.

The Printing Office has received the following bids for 3,260 pounds of 16½ x 20½—No. 36 white ledger paper: R. P. Andrews Paper Company 20.1 cents per pound; Old Dominion Paper Company 20.49 cents; American Writing Paper Company 20 cents; Dobler and Mudge 20.19 cents; Reese & Reese 28.11 cents; Barton, Duer & Koch Paper Company 14.7 cents.

The Government Printing Office will receive bids on March 9 for 54,000 sheets of various sizes blue and red pressboard.

The Esleeck Manufacturing Company has been awarded the contract for furnishing the Government Printing Office with 8,000 pounds (500 reams) of 21 x 32, white manifold bond paper at 35 cents per pound, bids for which were received on February 16.

St. Helen's Pulp & Paper Co. Elects Officers

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., February 27, 1925.—W. P. Hawley, Sr. was elected president of the new $2,500,000 St. Helen's Pulp and Paper Company at an organization meeting held on February 24 in Portland. Willard P. Hawley, Jr., was elected vice-president and H. B. Beckett, Portland attorney, is secretary and treasurer. Joseph Kaster of Salem, Oregon, was chosen as superintendent and H. F. McCormick, in charge of the McCormick lumber and shipping interests at St. Helens, was elected chairman of the board of directors. When the first stockholders' meeting is held nine directors of this board will be selected.

The construction of the new plant according to tentative arrangements will start in about thirty days. The Hawleys are leaving for the east to purchase machinery and equipment for the Kraft paper mill, the first of its kind to be established on the Pacific coast outside of Canada. It will probably take at least ten months time to build and equip the plant.

At the meeting on the 24th the mill site was expanded through action of the officers from twelve acres to thirty-two acres river frontage.

At the start the new mill will employ three hundred. In the manufacture of the Kraft paper a great deal of Douglas fir will be used. The company and its affiliations hold approximately 4,000,000,000 feet of timber that will be available for use in the new plant.

Ready shipping facilities by water is one advantageous feature that will supplement the business of the new plant.

To Hold National Round Table

A national round table for the discussion of business conditions in the entire paper industry will be held at New York on Monday, March 30, the day before the opening of the annual convention of the National Paper Trade Association. Instead of a purely New York division report on conditions, the Salesmen's Association of the Paper Industry will be invited by the New York division to attend a national get-together for a free-for-all discussion of market conditions and prospects for the balance of the year.

The decision to hold such a national round table was reached at the weekly luncheon of the New York division on Monday of the current week. It was reported that a number of the leading salesmen from all sections of the country will be in the city during the week of the merchants' convention and it was thought that a round table of more than the ordinary scope would be a happy way of getting the salesmen together.

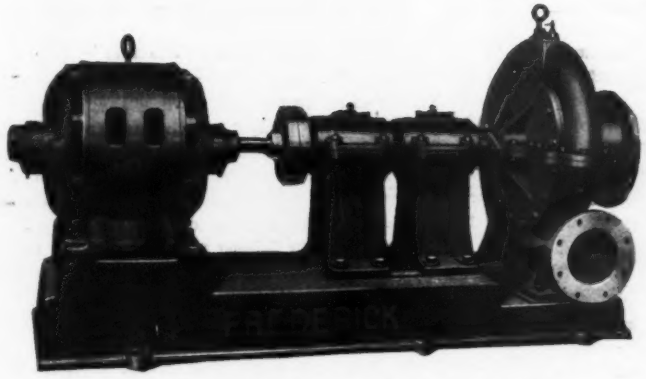
A. L. Whittaker Dies at Cincinnati

[FROM OUR REGULAR CORRESPONDENT.]

CINCINNATI, Ohio, March 3, 1925.—A. L. Whitaker, President of the Whitaker Paper Company, died at his home here today after an illness of a year. He was 66 years old. From a school teacher in the mountains of Tennessee, Mr. Whitaker rose to be an outstanding figure in the paper jobbing industry of the United States. He founded the Whitaker Paper Company.

FREDERICK PUMPS

PAPER MILL PUMPS



FREDERICK STANDARD MOTOR DRIVEN CENTRIFUGAL PAPER MILL PUMP

Pumps designed for handling water cannot be converted to paper mill pumps by cutting the shrouds from the impellers and fixing them in the casings. Don't be fooled by such clumsy makeshifts.

Stock pumps may be of the double suction or the single suction type. For the same capacity and head, the suction area must be approximately the same. Do you want the suction area halved, as it must be in the double suction type?

We believe that the openings in a paper mill pump should be large, so design only single suction impeller pumps. The design of the impeller is also peculiar to the job of handling stock.

Our stock pumps were built specifically for paper mill work after conferring with paper mill engineers and users of stock pumps. Notice the horizontal and vertical flanges in the casing. The bearings, couplings, shafts and bolts are all oversize.

We are supplying the needs of many of the prominent paper makers of the country. Have you investigated our pumps?

Catalog upon request

The Frederick Iron & Steel Co.

Frederick, Maryland

Dominion Engineering Works, Ltd., Montreal, Canada

Sole manufacturers and representatives in Canada.

Growing Trees for Pulp and Lumber at Bogalusa

The following address was delivered by J. K. Johnson, forester of the Great Southern Lumber Company, Bogalusa, La., at a meeting of the Southern Forestry Congress held in Little Rock, Ark., January 19 to 21:—

What I shall say will be chiefly of local application. I find it easier to talk about the things being thought about and worked at. The Great Southern Lumber Company started in 1920 to doing some things in the woods which they were led to believe would result in another crop of pine trees on their cutover lands. They expect to need pulpwood and saw timbers continuously.

No Scientific Basis Until Recently

Previous to starting the practice of forestry five years ago, yields to be expected were not figured down to very much of a scientific basis, as desirable as such figures are. To state it plain and simple, the company officials knew through observation that pine trees in that region grow mighty fast. They took advantage, of course, of the knowledge of well known men whose business it is to know.

One thing has evidently constantly held the company to the earth. The capacities of the land for great yields signifies nothing, but the protection of the region against those agencies which prevent yields means everything. Therefore, as the work progresses from year to year, access to data compiled by men who know is available, which can be applied in anticipation of yields on young protected forests.

A recent publication of the "Southern Lumberman" in an article by R. D. Forbes, presents some interesting data. It is shown that yields per acre, cords of unpeeled wood (loblolly pine) in North Carolina, are as follows:

Age	Better Land	Medium Land	Poorer Land
20	37	24	..
25	58	40	22
30	75	53	33

It is stated that these estimates have been carefully compiled. They seem reasonable. Comparative yields both in loblolly and shortleaf in the States of Arkansas and Maryland are presented in the article. Our attention is especially attracted to the following paragraph relative to slash pine:—

Amazing Growth of Slash Pine

"Slash pine, which many think is even a better tree than lobolly pine because of its heavy yield of naval stores, has not been studied much to date, but it is safe to say that its early growth is amazing. On the best acres it will yield as much as 12 cords of wood with bark in ten years, according to a few measurements by the U. S. Forest Service. At 15 years, from 12 to 27 cords to the acre have been measured; at 20 years, from 20 to 46 cords; at 25 years, from 27 to 36 cords; and at 30 years 32 to 62 cords. These wide variations are due to difference in soil."

In this article interesting discussion is presented about longleaf and certain hardwoods.

More Reliable Data

No doubt there is even now and will continue to be more and more reliable data as to yields under varying conditions available as a basis for computing anticipated returns from our young forests. The greatest task confronting the owner of denuded or idle lands is to do those things necessary to create and protect new forests.

At the outset, promise was made to discuss matters of local interest. That, of course, means Bogalusa.

Including one ranger and six short time co-operative patrolmen, being men the state selects and pays each $25.00 per month to apply on their salaries during certain seasons, together with five other patrolmen paid entirely by the Great Southern Lumber Company, about 200,000 acres of land in Washington Parish contiguous to Bogalusa, is being kept rough. That means to say that during the dry summer and fall season, and up to this time, fires have been kept down on the area. This 200,000 acres comprises timbered lands, farm properties and cut-over forest lands. Nearly 150,000 acres of it is owned by the Great Southern Lumber Company. About 120,000 acres of this 150,000 acres is cut-over and is the scene of the present major forestry activities of the company.

35,000 Acres Fenced Against Hogs

35,000 acres has been fenced against hogs. This required 75 miles of fencing. Some 25,000 acres of land thoroughly denuded is being planted by hand. Of this, more than 10,000 acres will have been planted at the end of this season. Two million plants have already been lifted from commercial nursery and planted in permanent field this season. Planting is under way at rate of about eighty thousand seedlings per day. This is providing labor for about one hundred men and boys from nearby farms who know how and like to work with the soil. This season's nursery should provide around four millian plants, of which about one million is slash (Pinus Caribea) and nearly three million loblolly (Pinus Teda) and a much less amount of longleaf (Pinus Palustris).

To Use as Much Slash as Possible

Last fall the company secured 1,200 pounds of well cleaned slash pine seed. This is to be mainly used in the planting of this year's nursery. Henceforth, it is thought wise to use as much slash as possible in future planting. As far as we have been able to tell, slash will grow, and grow well, on any site capable of growing any other pine tree in our territory, and is proving to be much less subject to insects compared especially to loblolly.

Now we stated that about 120,000 acres of the total area being patrolled is cut-over land, and that 25,000 acres is being planted by hand. That still leaves 95,000 acres of cut-over land. This area has been, and is in the main, reforesting naturally due to natural seeding and protection.

The protection feature is a big item in the scheme. Not big in comparison to the work of the U. S. Forest Service in effectively patrolling millions of acres of our National Forests, and a few of the states like Pennsylvania and others with great state forests, but in the heart of a piney woods parish in Louisiana, where up until very recently the annual burning of the entire area was accepted by the local public as a matter of course.

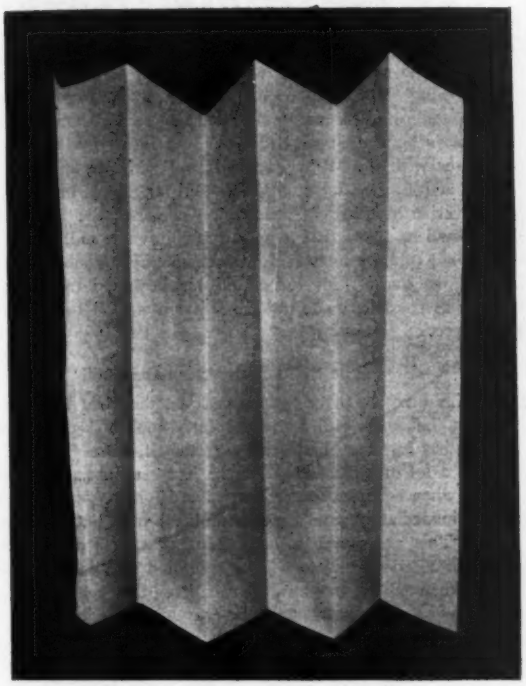
A Big Proposition

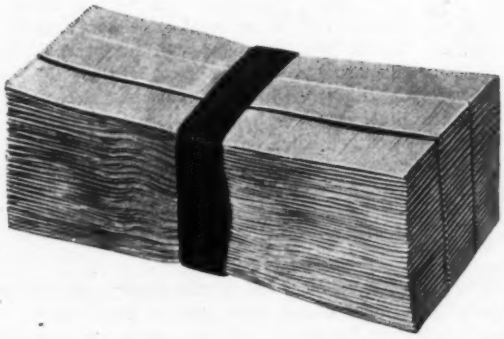
It is a big proposition, for one thing, in point of the amount of money it seems necessary to expend in keeping fires down. With the use of plows, usually pulled by Fordson tractors, and with kerosene torches, and fire fighting equipment, miles and miles of fire lines are burned along the road sides, around small farms and young pine plantations.

Fire Hazard to Decrease

It is expected that henceforth, year after year, the fire hazard will decrease. Otherwise, it would seem almost an impossible task. The young forests, planted either by hand or nature, represent invested capital and hence intensive measures are adopted for their protection. While the trees are small and young, fire would kill them all. They will in a few years reach a size above the danger of an ordinary grass fire on the one hand, and on the other it is expected that people everywhere will be less apt to permit the escape of fire through intent or carelessness.

Thus we see that the whole scheme of growing new forests is largely a matter of faith. But after all, what is there in life that is worth while, that is not founded on faith. From the lumberman's standpoint, Forestry is the long look.





WARNING

Our **fan** or **accordion** fold napkin as shown here is protected by United States Letters of Patent Nos. 1,501,662 and 1,499,926 as well as in Canada and other foreign countries.

Any manufacturer or converter producing paper napkins or the likes in such a **fan** or **accordion fold** regardless of lengths or widths is an INFRINGER, and will be held liable. Dealers buying or selling such folded product are equally liable as INFRINGERS.

We seek no legal actions for injunctions or damages from anybody who heeds this warning, which is not intended for the reputable and reliable manufacturer, converter or dealer, all of whom respect the laws governing patent rights.

INDEPENDENT PAPER MILLS, INC.

Bush Terminal

BROOKLYN, N. Y.

In the Footsteps of a Paper Mill Superintendent

He was an ordinary every day paper mill superintendent, looking after the product of a four machine mill, producing forty tons of fifteen or twenty different grades of paper, made from everything from ground wood up to No. 1 shirt cuttings.

His day started at six a. m. when he awoke to realize he had another day of uncertainties before him. While he dressed and got ready for breakfast, he wondered how No. 4 machine got along on that light weight sheet last night, and did the beater belt on No. 2 hold out, and if the wire on No. 1 got through all right. And then while he was trying to down his breakfast of ham and eggs, he almost choked when he remembered that he promised that No. 3 would be making the J. R. T. order today, when it could not do so until two days later. And he spluttered while drinking his coffee. because he recalled that the S. B. Co. threatened to reject the paper made for them, because it was the wrong finish. And seven or eight other customers were yelling for their paper which was made, but the cutter room was so far behind its work, that it was impossible to get the orders out. As he was leaving the house, with stooped shoulders, he thought of the job that must be done on the main beater line, and wondered when he would get a chance to have the mechanics do it. And so the poor man went to his work, his mind occupied with plans for a day, that would take several weeks to accomplish, not to mention the fact that things were bound to occur during the day, that he did not dream of at this time.

Arrives at the Mill

He arrives at the mill, over anxious to check up the night's run in production and quality of product, and he begins on No. 1 machine, but before he has a chance of getting there, he is approached by the master mechanic, who has troubles enough to start a lunatic asylum, and he desires to hoist most of them onto the already over burdened brain of the Super. While the master mechanic is reciting a few of the lighter troubles, the Super looks at him in a "killing" way and wishes he was at the bottom of the river. The M. M. has been through this before and suffers not one bit, but continues to predict that the whole mill will be down within twenty minutes if they do not stop to fix this or that, and besides he is short three of his best men who are out on a drunk, and that the steel shaft for No. 2 winder has not turned up, and some lumber that he had been waiting for, for over a week, is still missing. Just about the time the Super has decided to haul off and bang the M. M. in the nose, the beater engineer comes up on the double quick, and wants the Super to come right out in the beater room to look at some of the dirtiest pulp that ever got into the mill, and the Super is glad to go, to get away from the M. M.

Out in the Beater Room

Out in the beater room he listen to the ravings of the B. E. about how he gets blamed for dirty paper, and it is not his fault at all and how could any man be expected to make clean paper out of such trash. The Super was about to send for his worthy assistant, who usually kept out of his way, especially in the morning, when that gent comes hustling in and says he would have to shut down No. 3 to put a wire on, as something had wrinkled it, just what he did not know, but he thought the Super had better take a look at it before they took it off. By this time the Super had begun to pull a few more hairs out of a rapidly diminishing crop on the crown of his head, and the murder flash was beginning to show in his eyes. He told the beater man to begin on another car of pulp and started off with his assistant to look at the wrinkled wire. After due inspection, which did not disclose the cause of the wrinkle, he told them to save the wire carefully when it was removed and put in a claim on the wire manufacturer.

It was now 9 a. m. He had arrived at the mill at 7 a. m. and had not yet even had the opportunity of looking over the night's run, or checking up the production and though he had done no physical labor, he was sweating as much as if he had been handling a pick and shovel.

The master mechanic, a man of very poor judgment, when anything outside of machinery was concerned, showed very poor tact, in following the Super around in his troubles, expecting to get an answer regarding the matters he had approached him on, and he got it. Just after the Super had looked at the wrinkled wire, he was overcome with the "What the hell do I care" feeling, and when he turned and saw the faithful M. M. still tagging at his heels, he tried to pulverize him with a "dagger" eye, which the M. M. had seen before and he knew that it meant, if the whole mill went to smash, he did not propose to have any mechanic with troubles, tagging him around, so the M. M. turned on his heel and made his exit as rapidly as possible, while the Super again started for No. 1 to begin his inspection of the paper.

The "Old Man" Sees the Mail

By this time the office had opened and the "Old Man" was going through the mail, with his usual early morning grouch, expecting nothing but bad news and usually getting it.

With a lot of puffs and snorts he had read about one-half of the letters, when he came to one that caused him to get red in the face, and he immediately gave a nice little black push button a tremendous shove. This act caused a large gong to ring with a disagreeable sound in all departments of the mill and everyone, including the Super, knew that it was an urgent call for that gentleman's presence in the office. He heard it, as he was about to look at a sheet of paper from No. 1 machine, and he said "Damn" and started for the office. When he got there, the "Old Man" had worked himself up into a proper state of mind to feel fairly explosive, and he did not touch a match to it, until the Super had read the letter he handed him. The letter was from a customer, noted for his weakness in accepting any shipment of paper, without trying first to make a claim of some kind, and while the Super appreciated this, the "Old Man" did not and he brought the poor Super almost to the breaking point, by his remarks on someone's inability to make paper that would satisfy good customers. The Super was as near telling the "Old Man" where he got off, as he could be without actually having a smash-up. But he held his temper and said he would look up the complaint, and started to leave the office, but the "Old Man" had by no means finished, in fact he was just getting started. There were about fifty different things he wanted to know about, such as delivery of orders, and when this and that would be made, and how it was that the shrinkage on No. 2 machine was so high last month, and the coal consumed was on the increase, and something would have to be done to speed up the finishing room, and a few other things.

Noon Time

The Super left the office and he was groggy. By this time he had reached the twelve o'clock noon state of mind, usually carried by paper mill superintendents, and was game and ready for more trouble. He had not had the opportunity of doing one thing this day that he had planned on doing, and the mill had received but slight attention from him. He had decided to go and grab a quick lunch and had reached the door, when his assistant came running up and advised that, they had dropped the new wire they were about to put on No. 3 on the floor and had dented it and he did not know whether it should go on or not, would the Super take a look at it. Indeed he would, here was a chance to blow off some of his pent up feelings. So wrathfully he walked to No. 3 machine room and in front of the whole crew, demanded from the boss machine tender, an explanation of how the accident had happened. And on the spot he

Fast Shades on Wrapping Papers

IF the production of shades possessing unusual fastness to light and bleeding is required on those grades of wrapping paper where brilliancy is not essential, the National Direct and Sulfur Dyes are given preference.

Dyes of these distinctive groups, used alone or in combination, will meet all the requirements for this class of paper.

NATIONAL DYES
FOR PAPER

National Aniline & Chemical Co., Inc.
40 Rector Street **New York, N. Y.**

Boston
Providence
Hartford
Philadelphia
Chicago
Charlotte
San Francisco
Montreal
Toronto

fired the two men he considered responsible and ordered that another wire he put on. And then he went to lunch and what he ate was corned beef and cabbage, which when mixed with his state of mind, put him in the position of a man with complete indigestion.

Hurries Back to the Mill

He hurried back to the mill determined to kill the first man who would interfere with his accomplishing what he set out to do, and he went around to each machine, with such a look on his countenance, that no one dared to approach him, and thus he succeeded in getting a line on what the machines had done during the night and what he could expect them to do during the following twenty-four hours, if things went on as usual. Then he returned to his office and straightened out his schedule of orders, and refused to be interrupted by any one, and when he had done these things, he sent for the master mechanic to resume the conversation that had been broken off so many hours before. He was now at the two o'clock state of a paper mill Super's mind and was becoming fairly good natured, so when the M. M. came in he said to him, "This paper making is a hell of a fine business, ain't it Jim?" and Jim the M. M. agreed it was and knew that the Super was again normal and would listen to anything he had to say, so he went on and said it. They planned on this and that and Jim went out of the office satisfied that things were all right again for a while at least.

"Old Man" in Better Humor

And then the "Old Man" put in a call for the Super and smoothed over the morning session by saying that some customers expected entirely too much for what they were paying and he guessed that they could make paper as well and good as the next fellow, and the only thing to do was plug along as they always had done. This was all the Super needed to put him in the four o'clock state of mind, and from this time to five thirty, he accomplished more real honest to goodness paper mill superintending, than he had been able to do all day, and when he left the mill that evening, he felt as if he had done a big day's work.

This state of mind was good only to eight thirty that night, for at that particular moment they phoned to him from the mill, that the line shaft on No. 4 beaters had twisted off, and that it would be at least twenty-four hours, before repairs could be made. His sleep that night of course, was not refreshing and he began the next day as he had the previous one and as he would the following one, and so will every paper mill Super.

There are things connected with the paper industry, that must be carried by the man running the mill, and a few of them have been mentioned, but not the most of them. Just as long as paper is made, machinery will continue to break down, and wires will wrinkle. Customers will complain on shipments of paper, and dependable men in the mill will continue to make mistakes. And promises of deliveries will be from one to three weeks and sometimes more behind date. This is all a part of the game, but most of the blame comes to the man who is actually operating the mill, and the only alibi he has is to shift it to some of his assistants and good paper mill Supers do not do this. Most of them scowl and bear it and eternally hope for better luck.

The Super's Burden

Perhaps some readers will say, why don't the Super make out a regular schedule of work and be guided accordingly, and leave the less important duties to subordinates. This would be fine if it could be worked successfully, but there are mighty few conscientious superintendents, who could arrange their work in such an ideal way. Paper making is not like shoe making or other industries, it has too many unreliable factors, which must have constant attention, and while some sort of a system is greatly to be desired, one that will enable the Super to give his time and thought to the more important details of the business, and Supers experience just what this article relates. It is the unexpected that makes the Super's job what it is. If he could always figure on the mill doing what he plans it should do, his worries would be nil, but it is the night operation of the plant, and the things that happen in the night, that throw him and his plans into strange channels.

No one class of individuals in the paper industry have more courage than the fellows who run the mills, for they carry the biggest burden and have grown strong enough to bear it. If the mill is not paying, the Superintendent is blamed, if the paper is wrong, he takes the blame, if anything is wrong, he stands with open arms to absorb the shocks, and yet he is a fairly happy sort of man and good company in any crowd.

Improvement in Baltimore

[FROM OUR REGULAR CORRESPONDENT.]

BALTIMORE, Md., March 2, 1925.—A trend of improvement was noted in the paper trade generally during the last week and merchants particularly were optimistic with regards to the immediate future. A fair amount of business is being placed and inquiries, especially in the last seven days, have been lively. Competition, however, has been unusually keen since the first of the year and sales forces have been compelled to "keep on their toes," as their activities were expressed recently by a veteran salesman.

The next regular quarterly meeting of the Baltimore and Southern Paper Trade Association will be held in Baltimore next month and preparations are being made for an interesting and well-attended session. The officers of the association are: President, Robert Johnston, of the Old Dominion Paper Company, Richmond, Va.; vice-president, H. A. Lengnick, head of the paper company bearing his name at 226 West Pratt street, Baltimore; secretary, John C. Burke, of the Baltimore Paper Company, Inc., 215 West Pratt street, Baltimore, and treasurer, John E. Lorenz, of J. Francis Hock and Company, paper dealers, 30 South Charles street, Baltimore. At the quarterly meeting to be held in Baltimore in June, officers for the ensuing year will be elected.

William R. Lenderking, president of the Purity Paper Vessels Company, of Baltimore, is on a business trip to New York City, New England and the West. Officials of the Purity Paper Vessels Company are making preparations rapidly to remove from their present quarters at 5 and 11 West Conway street to the former plant of the old Clipper Mills, in Woodberry, which plant the paper vessel company purchased recently. Mr. Lenderking and his associates hope to have the business in operation at the new location as soon after March 1 as possible.

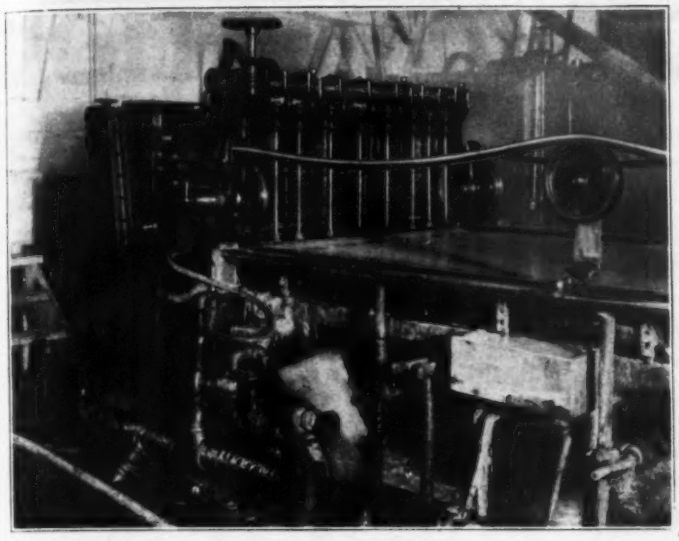
The Whitaker Paper Company of Baltimore is mailing out its first new price list in the 1925 series, which will consist of three publications to be sent out from all of the offices of the company.

Power Used by Fort Frances

An appeal brought by the Ontario and Minnesota Power Company and the Fort Frances Pulp and Paper Mills against the judgment of Chief Justice Meredith, Toronto, in respect to the supply of power of the town of Fort Frances, was heard recently in Toronto. The municipality sued the companies for the arrears of taxes and a counter-claim was lodged for money owing for the supply of power. Adjournment was made for two weeks to have both parties to the action submit a statement to the court for its information regarding the different purposes for which the power was used by the town.

Great Lakes Plant Busy

The ground wood pulp plant of the Great Lakes Paper Company, Fort William, Ont., is busy at the present time, turning out 170 tons daily which is being sold to the Fort Frances Pulp and Paper Company. The company has plans well under way for the erection of a new news print mill in the spring, and is purchasing this season 45,000 cords of pulp wood, 20,000 of which will be taken from settlers during the year and the remainder from contractors and wholesalers.



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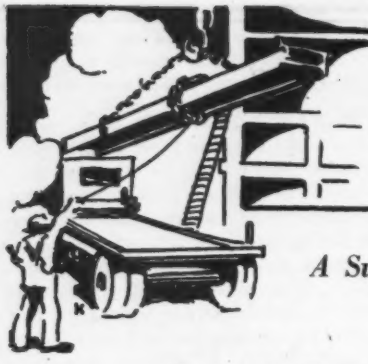

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Kalamazoo, Mich.—The Bradford Paper Company has work under way on the rebuilding of a portion of its plant, and plans for the early installation of machinery. It is proposed to have the structure ready for production early in the spring.

Baltimore, Md.—The Purity Paper Vessels Company, 5-11 West Conway street, has acquired property at Woodberry, near Baltimore, heretofore used for textile production by the Mt. Vernon-Woodberry Mills, Inc. The new owner will take immediate possession and will remodel and improve the structure. Machinery will be installed for the manufacture of paper boxes and containers. It is expected to begin production at an early date, with plant work reported to cost in excess of $45,000. William R. Lenderking is president.

New York, N. Y.—The John F. Sarle Company, 85 John street, manufacturer of paper products, with works at Westfield, N. J., has awarded a general contract to Charles A. Cowan, 30 East Forty-second street, New York, for the construction of a new three-story building, 60 x 113 feet, at 48-50 Hudson street, to be used for general storage and distributing service. W. F. Hemstreet, Woolworth Building, New York, is architect. K. S. Warner is president.

Niagara Falls, N. Y.—The plant of the Pettebone Cataract Paper Company, located in the lower hydraulic basin district, has been acquired by the Niagara, Lockport and Ontario Power Company. The new owner plans to continue the mill for present character of service, and is making arrangements to electrify the complete works, replacing water power operation, as heretofore.

Niles, Mich.—The French Paper Company is said to be planning for the early rebuilding of its pulp sheds, recently destroyed by fire. An official estimate of loss has not been announced.

Richmond, Va.—The Randolph Paper Box Company, 1313 Ross street, has plans under way for extensions and improvements in its plant, including remodeling of a portion of the structure. It is said that additional equipment will be installed for increased output. Carneal & Johnston, Virginia Railway & Power Building, are architects.

Norwood, Mass.—Bird & Sons, Inc., East Walpole, Mass., manufacturer of paper roofing and other processed paper products, has had plans drawn for further additions to its local plant, following the award for the construction of a number of one-story units a few weeks ago. The new work consists of a two-story building, 80 x 100 feet, to be equipped for finishing service, estimated to cost about $60,000; a one-story structure, 120 x 130 feet, to cost approximately $65,000; and a one-story building, 80 x 200 feet, to cost $60,000. Monks & Johnson, 99 Chauncy street, Boston, are architects.

New York, N. Y.—The International Paper Company, Pershing Square Building, is perfecting plans for the organization of a subsidiary company to take over and operate its Canadian properties, including the Riordan and Gatineau paper and pulp mills, recently acquired. Preliminary arrangements are said to be under way for expansion in properties in the Canadian districts, to include new mill units for newsprint production and the installation of additional equipment at existing mills. The parent company will increase its capital from $20,000,000 to $25,000,000, and also is arranging for a new bond issue of $22,500,000, of which a portion will be used in connection with the expansion program.

Fox River, Wis.—The Fox River Pulp and Paper Company has awarded a general contract to McLarty Brothers, Sault Ste. Marie, Ont., for the construction of its proposed new pulp mill on the Kagawong River, Manitoulin Island, Ont., to consist of a number of units, estimated to cost close to $450,000, with grinders and other machinery. It is purposed to have the plant ready for the equipment installation early in the fall.

Elsmere, Del.—The Diamond State Fibre Company, Bridgeport, Pa., is planning for the removal of its fibre tube manufacturing mill to a local site, and will curtail operations temporarily for this purpose. It is proposed to re-establish the plant at an early date, giving employment to close to 60 operatives for this branch of production.

New Companies

Poughkeepsie, N. Y.—The Roberts-Berce Paper Company has been incorporated with a capital of $50,000, to manufacture and deal in paper products. The incorporators are J. Roberts, F. I. Mackay and J. Berce. The company is represented by J. B. Ball, Poughkeepsie.

New York, N. Y.—The Bernhardt-Zinn Paper Company has been incorporated with a capital of $10,000, to deal in paper products. The incorporators are D. and A. Berrherdt and P. Zinn. The company is represented by Nathaniel Brenner, 299 Broadway, New York.

Chicago, Ill.—Acer & Co., Inc., 1332 Conway building, has been incorporated with a capital of $10,000, to deal in paper and pulp products. The incorporators are Theodore Peters, H. J. Maloney and F. H. Fieweger.

Huntington, W. Va.—The Ohio Valley Paper Company has been incorporated with a capital of $50,000, to manufacture paper products. The incorporators are S. G. Fisher and F. C. Hibbard, Gysheum Apartments, Huntington. The last noted is representative.

New York, N. Y.—The Hartford Paper Box Company has been incorporated with a capital of $10,000, to manufacture and deal in paper boxes and containers. The incorporators are S. Lansky, M. Schneider and M. Bookspan. The company is represented by Weinberg & Oltarsh, 158 Rivington street, New York.

Rochester, N. Y.—The Wilmot Corporation, 67 Alemeda street, has been incorporated with a capital of $100,000, to manufacture sensitized and processed papers. The incorporators are F. Wilmot, C. C. McCord and C. A. Brady.

New York, N. Y.—Fuld & Co., Inc., has been incorporated with a capital of $100,000, to manufacture and deal in paper products. The incorporators are F. P. Price and M. Rosenblum. The company is represented by J. A. Michel, 38 Park Row, New York.

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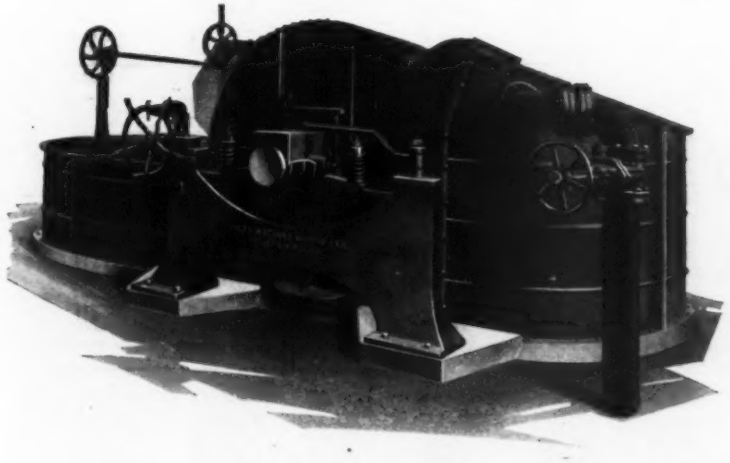

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PAPER AND PAPER STOCKS IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending December 31, 1924, and for the Twelve Months Ended December 31, 1924, as Compared with Corresponding Months of Previous Year

IMPORTS—PAPER.

Paper and Manufactures of	December 1923 Quantity	December 1923 Value	December 1924 Quantity	December 1924 Value	Twelve Months Ending December 31 1923 Quantity	Twelve Months Ending December 31 1923 Value	Twelve Months Ending December 31 1924 Quantity	Twelve Months Ending December 31 1924 Value
Paper, except printed matter (total)	.....	$10,525,137	.....	$10,452,683	.....	$116,137,816	.....	$118,316,451
Printing paper—								
Standard news print lbs. Free	231,006,469	8,784,740	250,482,105	9,217,111	2,617,685,620	98,021,045	2,714,466,600	101,297,266
Imported from—								
Finland	3,212,828	122,533	5,104,195	179,422	83,767,073	2,781,870	71,279,771	2,250,219
Germany	10,277,417	338,343	3,540,918	106,737	104,580,240	3,435,370	77,801,028	2,357,816
Netherlands	158,409	5,026	.....	.....	3,951,964	137,999	2,152,928	69,021
Norway	2,028,642	66,855	5,154,271	160,208	67,662,125	2,328,502	34,521,557	1,106,196
Sweden	6,963,335	238,231	11,639,975	352,130	129,142,858	4,171,325	122,904,391	3,852,204
Canada	207,930,017	8,001,405	217,231,259	8,158,511	2,216,932,524	84,773,013	2,394,010,464	91,282,525
Other countries	435,821	12,347	7,811,487	260,103	11,648,836	392,966	11,796,461	379,285
All other, n. e. s. lbs. dut.	1,354,484	61,163	1,701,718	77,600	16,793,825	831,282	26,710,868	1,125,825
Grease-proof and water-proof papers lbs. dut.	444,086	38,225	172,238	16,505	3,207,941	296,474	1,431,665	161,436
Wrapping paper lbs. dut.	6,344,908	270,161	.....	.....	88,011,848	3,906,120	.....	.....
Kraft wrapping paper lbs. dut.	.....	.....	1,907,679	79,195	.....	.....	28,216,656	1,090,488
All other other, wrapping paper lbs. dut.	.....	.....	764,052	30,985	.....	.....	21,432,512	840,511
Writing, drawing, bond, etc. lbs. dut.	258,743	42,070	317,566	60,517	3,452,032	650,623	2,746,108	620,985
Surface coated lbs. dut.	115,852	22,620	169,304	35,190	1,156,743	309,050	1,946,078	451,954
Tissue paper lbs. dut.	235,042	81,788	182,605	80,694	2,036,153	916,832	2,404,799	986,439
Paper boards—								
Pulp boards in rolls lbs. dut.	6,258,254	173,067	4,729,094	127,371	78,775,396	2,239,225	77,223,012	2,122,089
Other paper boards, n. e. s. lbs. dut.	2,128,231	58,421	2,615,252	64,072	24,801,402	722,377	31,497,146	738,494
Cigarette paper, cigarette books and covers lbs. dut.	1,900,831	516,208	827,590	219,685	12,193,052	3,211,080	10,980,534	3,028,125
Photographic paper lbs. dut.	212,115	45,346	65,251	22,074	2,224,698	479,212	3,141,973	643,691
Hanging paper lbs. dut.	1,699,123	80,244	818,519	62,440	10,558,835	558,831	13,991,261	632,662
Paper boxes lbs. dut.	.....	.....	190,237	119,791	.....	.....	1,829,521	1,179,441
Decalcomania, not printed lbs. free	61,718	15,467	52,976	13,469	387,879	100,857	516,249	123,633
All other dut.	.....	335,617	.....	225,984	.....	3,894,808	.....	3,273,418
Books and other printed matter (total)	.....	737,478	.....	1,049,646	.....	8,900,165	.....	10,058,203
Books and pamphlets in foreign languages lbs. free	173,304	84,075	211,376	143,478	1,646,301	1,005,377	2,396,363	1,453,479
Books, maps, music, etc., 20 years old lbs. free	27,066	65,869	45,988	301,681	375,118	1,671,568	385,410	1,912,062
Other books, etc. lbs. free	165,129	115,638	195,416	184,021	2,206,480	1,564,784	2,400,324	1,793,836
Books, pamphlets, and music, n. e. s. lbs. dut.	334,222	226,648	279,348	222,955	3,150,285	2,425,440	3,363,451	2,393,168
Maps, charts, and other printed matter, n. e. s. dut.	.....	94,135	.....	75,842	.....	733,469	.....	849,673
Lithographically printed matter, n. e. s.—								
Cigar bands, labels and flaps lbs. dut.	20,102	22,308	7,932	11,378	253,545	215,208	107,502	140,840
Decalcomanias lbs. dut.	19,273	26,438	15,637	25,149	184,686	268,141	250,774	361,678
All other dut.	.....	102,367	.....	85,142	.....	1,016,178	.....	1,153,467

CRUDE PAPER STOCK.

Rags for paper stock lbs. free	37,283,427	673,740	49,897,545	1,437,429	397,729,699	7,153,469	507,263,043	11,883,385
Waste bagging, waste paper, etc. lbs. free	8,065,553	95,509	9,173,968	124,651	128,983,578	1,749,550	108,681,381	1,299,843
Old rope and all other paper stock lbs. free	8,705,001	479,334	6,724,498	393,301	104,138,277	4,857,037	96,115,238	5,154,319

WOOD PULP.

Mechanical ground tons. free	32,033	1,052,876	26,096	758,096	267,927	9,296,879	219,571	7,190,129
Chemical wood pulp—								
Sulphite, unbleached tons. free	42,637	2,503,777	65,556	3,491,238	461,853	26,548,431	562,020	30,092,530
Sulphite, bleached tons. free	18,695	1,624,637	24,379	1,891,374	250,580	22,245,865	272,370	21,006,429
Total sulphite tons	61,332	4,128,414	89,935	5,382,612	712,433	48,794,296	834,390	51,098,959
Imported from—								
Finland	4,519	282,277	3,362	191,920	70,665	4,139,051	54,676	2,855,021
Norway	3,893	343,305	7,904	578,196	68,071	5,509,563	61,356	4,349,849
Sweden	14,778	1,002,157	31,819	1,722,678	201,023	12,693,582	291,199	16,454,737
Canada	27,707	1,931,097	34,582	2,191,155	299,183	21,595,134	328,332	21,609,563
Other countries	10,435	569,578	12,268	698,663	73,491	4,856,966	98,827	5,829,789
Sulphate pulp, unbleached (kraft pulp) tons	24,776	1,538,409	25,910	1,456,525	233,696	15,228,747	277,994	15,904,350
Imported from—								
Finland	.....	.....	1,888	96,607	14,678	866,357	13,328	644,380
Norway	644	42,607	271	14,482	8,986	531,262	12,558	631,823
Sweden	12,910	759,204	13,527	710,375	77,150	4,692,178	123,602	6,516,526
Canada	11,127	732,512	9,505	595,367	131,168	9,022,496	124,447	7,902,233
Other countries	95	4,086	719	39,694	1,714	116,454	4,059	209,388
Sulphate pulp, bleached tons. free	50	4,630	2,319	138,874	15,422	1,080,961	27,613	1,549,629
Other pulp tons. free	615	39,789	164	11,787	6,318	391,796	2,126	125,272

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS.

Colors, dyes, stains, color acids, and color basis, n. e. s. lbs. dut.	247,117	316,851	416,256	574,104	3,265,022	4,436,922	3,433,946	4,459,456
Imported from—								
France	14,764	27,382	8,777	17,051	209,953	347,758	124,958	183,526
Germany	154,730	178,941	220,208	304,264	1,587,012	1,953,216	1,652,784	2,079,059
Italy	8,472	12,157	18,245	23,853	350,411	495,001	162,158	228,875
Switzerland	37,988	52,430	116,518	166,123	857,466	1,331,075	1,118,215	1,523,829
United Kingdom	12,376	15,328	26,925	23,568	110,410	112,732	107,510	102,526
Other countries	18,787	30,613	25,583	39,245	149,770	197,140	268,321	341,641
Casein or lacterne lbs. dut.	1,562,743	178,376	1,987,284	150,141	26,489,992	4,409,744	17,749,985	1,384,661
Kaolin, china, and paper clay tons. dut.	17,885	179,727	26,256	243,781	279,166	3,050,099	315,437	3,189,846

(*Continued on page* 50)

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PAPER AND PAPER STOCKS IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 48*)

EXPORTS—PAPER

Paper and Manufacturers of	December 1923 Quantity	December 1923 Value	December 1924 Quantity	December 1924 Value	Twelve Months Ending December 31 1923 Quantity	Twelve Months Ending December 31 1923 Value	Twelve Months Ending December 31 1924 Quantity	Twelve Months Ending December 31 1924 Value
Paper, except printed matter (total)	.....	$2,186,207	.....	$1,865,450	.....	$25,682,749	.....	$24,578,872
Printing paper—								
Newsprint paper....lbs.	3,780,546	176,945	2,699,684	136,159	32,714,732	1,636,937	34,317,278	1,773,187
Exported to—								
Canada....lbs.	150,539	9,358	84,097	5,247	1,132,422	98,141	1,086,772	82,506
Central America....lbs.	51,947	2,733	34,208	2,081	1,366,049	69,188	678,759	38,055
Mexico....lbs.	139,367	8,811	33,154	2,066	1,351,356	86,777	2,273,703	118,892
Cuba....lbs.	2,756,675	121,242	1,336,309	55,848	20,343,644	925,156	18,420,438	826,280
South America....lbs.	157,249	8,154	207,316	13,403	1,828,870	95,339	2,558,505	150,167
Japan....lbs.	111,587	7,083	50,068	3,294	1,158,266	75,899	712,404	50,138
Philippine Islands....lbs.	231,081	9,789	538,967	24,698	4,417,661	215,978	4,261,211	203,427
Other countries....lbs.	182,101	9,775	415,565	29,522	1,116,464	70,459	4,325,486	303,722
Book paper, not coated....lbs.	1,826,479	206,391	1,560,601	157,421	26,597,921	3,001,149	18,581,795	2,078,589
Exported to—								
United Kingdom....lbs.	38,962	7,948	.....	.....	617,076	136,412	711,831	139,685
Canada....lbs.	106,447	17,530	141,622	16,456	2,223,461	293,144	1,710,720	219,169
Central America....lbs.	42,543	6,580	47,193	4,795	873,746	102,303	623,699	68,145
Mexico....lbs.	92,954	10,206	136,493	15,452	2,047,626	232,317	2,086,866	227,866
Cuba....lbs.	365,495	42,630	280,982	30,910	7,007,372	752,729	3,735,893	415,965
Argentina....lbs.	70,772	6,587	39,768	6,239	1,003,603	136,695	692,120	67,940
Brazil....lbs.	6,062	1,177	16,074	1,830	815,273	92,130	372,273	48,420
Venezuela....lbs.	176,845	17,845	35,942	4,080	489,705	61,782	502,098	56,300
Other South America....lbs.	100,461	12,418	112,141	11,604	1,616,446	176,121	1,118,711	133,254
British India....lbs.	7,104	1,136	19,059	2,531	223,938	25,641	103,430	13,729
China....lbs.	404,890	34,593	586,867	49,506	2,841,663	286,327	3,756,155	339,467
Japan....lbs.	147,437	13,799	15,832	1,570	2,089,769	196,082	415,061	50,522
Philippine Islands....lbs.	131,800	17,459	66,164	5,543	3,003,506	281,552	1,256,632	116,975
Australia....lbs.	50,711	5,744	17,977	1,816	895,867	114,637	532,245	59,689
Other countries....lbs.	83,996	10,739	44,487	5,089	848,870	113,277	964,061	121,463
Cover paper....lbs.	126,907	19,227	82,879	17,750	1,197,327	210,061	839,670	161,644
Grease proof and waterproof paper....lbs.	121,585	21,776	85,478	11,182	1,640,980	219,715	1,567,213	184,675
Wrapping paper—								
Kraft paper....lbs.	93,940	8,956	55,227	4,408	873,373	79,737	638,588	72,600
Other wrapping....lbs.	2,396,352	201,525	2,089,320	169,226	25,873,856	2,096,640	24,420,296	1,968,267
Writing paper, except papeteries....lbs.	615,067	110,508	209,392	40,159	6,208,162	1,045,911	4,371,695	702,967
Surface-coated paper....lbs.	263,159	38,793	132,038	28,567	3,973,675	605,634	3,357,609	505,920
Tissue and crêpe paper....lbs.	303,974	74,084	288,541	77,395	3,375,634	846,808	2,980,456	794,861
Toilet paper....lbs.	334,826	38,365	378,148	43,415	4,631,838	545,176	4,345,816	504,525
Paper towels and napkins....lbs.	70,639	15,767	96,802	16,473	1,201,945	205,692	1,409,409	226,675
Bristols and bristol board....lbs.	55,538	8,545	49,992	6,159	1,876,018	161,211	884,917	106,073
Paper board and strawboard....lbs.	5,530,377	254,335	3,718,335	132,880	56,294,479	2,678,145	71,135,903	2,770,948
Sheathing and building paper....lbs.	424,623	23,034	1,064,830	51,945	3,767,627	179,884	7,149,598	344,976
Wall board of paper or pulp....Sq. ft.	2,421,231	80,416	2,448,292	75,386	16,623,665	611,548	17,490,076	578,908
Blotting paper....lbs.	.....	.....	189,539	22,816	.....	.....	2,450,556	296,376
Filing folders, index cards, and other office forms....lbs.	.....	.....	47,862	17,421	.....	.....	450,338	160,190
Cigarette paper and books....lbs.	130,882	36,599	16,193	5,395	598,649	193,944	830,647	296,326
Photographic paper....lbs.	94,152	79,827	91,493	81,147	1,451,654	1,399,158	1,586,309	1,569,633
Paper hangings (wall paper)....yards	2,431,599	60,810	1,978,382	48,883	22,944,547	576,023	23,215,530	608,684
Paper bags....lbs.	641,892	73,916	1,088,776	91,400	8,740,561	880,353	10,413,910	958,871
Boxes and cartons....lbs.	713,240	77,570	797,872	73,351	10,879,135	1,055,756	13,641,538	1,180,050
Carbon paper....lbs.	65,448	54,702	68,393	50,417	877,428	690,660	898,868	707,559
Envelopes....lbs.	260,968	48,006	215,114	39,904	2,812,654	550,344	2,443,861	481,318
Playing cards....packs	840,429	69,308	832,308	82,956	9,828,008	1,121,986	6,869,159	755,737
Cash register and adding machine paper....lbs.	135,379	14,424	108,954	11,325	1,198,515	130,696	1,250,340	137,250
Papeteries (writing paper in boxes)....lbs.	36,277	12,763	40,808	14,171	417,656	155,962	424,343	153,781
Other paper and paper products, n. e. s....lbs.	2,874,483	379,615	3,218,031	357,739	34,371,210	4,803,619	43,692,566	4,498,282
Books, maps, pictures, and other printed matter (total)....lbs.	3,793,601	1,438,686	4,182,762	1,406,097	49,544,195	17,874,639	55,505,553	19,172,388
Books and pamphlets....lbs.	.....	.....	.....	.....	.....	.....	.....	.....
Maps and charts....lbs.	2,233,460	746,374	2,546,196	713,166	26,624,133	8,743,864	33,640,800	9,707,510
Music in books or sheets....lbs.	10,707	16,079	16,995	18,987	176,476	166,585	198,207	183,919
Souvenir post cards....lbs.	46,602	28,239	27,498	23,440	590,924	359,348	618,855	377,758
Lithographically printed matter, except post cards and maps....lbs.	27,041	12,923	12,742	7,058	611,795	220,427	352,283	184,930
Other printed matter....lbs.	167,244	127,576	156,468	84,708	2,048,798	1,518,320	2,346,053	1,858,400
	1,308,547	507,495	1,422,863	558,738	19,492,069	6,866,095	18,349,355	6,859,871

WOOD PULP AND PAPER STOCK

Sulphite wood pulp....tons	1,098	59,719	1,466	86,639	14,675	850,825	20,731	1,256,195
Soda wood pulp....tons	45	4,200	268	24,446	2,993	287,291	1,939	182,396
Other wood pulp....tons	66	4,032	1,806	185,846	2,928	156,711	5,989	603,479
Rags, and other paper stock....lbs.	9,870,678	165,921	14,973,559	213,967	111,276,985	1,927,502	121,221,234	2,049,264

PAPER AND PULP MILL MACHINERY

Paper and pulp mill machinery....lbs.	475,607	111,691	606,080	177,076	11,479,483	2,006,812	10,146,383	2,130,685

National Paper Products Co. Buys Carton Co.

[FROM OUR REGULAR CORRESPONDENT.]

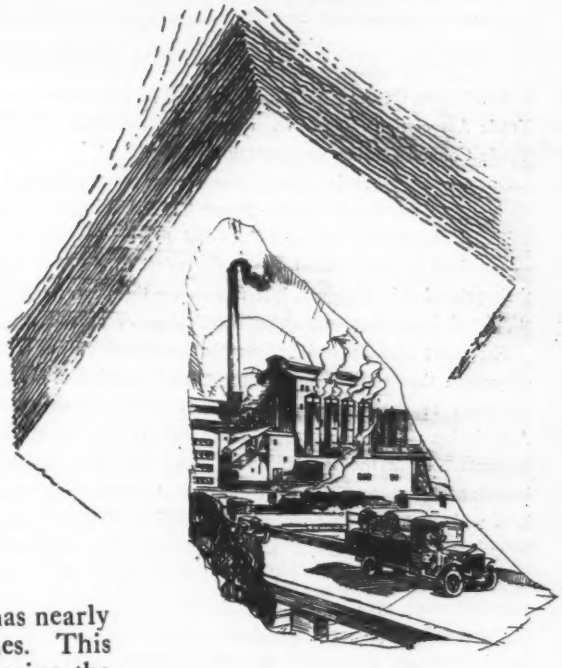
STOCKTON, Cal., March 1, 1925.—The National Paper Products Company and the American Carton Company, two of Stockton's most important industries, will merge into one company, according to the announcement made by N. M. Bristol, manager of the National Paper Products Company.

The two concerns occupy the same block and have for some time been allied in many respects. The Carton company was furnished with raw materials by the National company.

A large portion of the Carton plant is composed of printing and lithographing machinery. There are 120 employes at this plant and it is now in a prosperous condition with advance orders on hand, sufficient to keep the plant running for some time.

The New Beloit Shake

Produces a better formed sheet at a higher speed.



The new "Beloit" Fourdrinier and Shake has been designed, perfected and patented for the purpose of producing a better formed sheet at a higher speed, to accomplish on a wide, high-speed machine what a narrow, slow-running machine has heretofore done. Its application in tissue, kraft and other paper mills shows that it is accomplishing this with ease. It has demonstrated money, time and labor-saving qualities that have opened the eyes of mill men the country over.

Its application in one mill alone showed an increase of 15% in production within a few days after its installation. Sixteen orders, including four re-orders prove that it is "delivering the goods."

On a 160-inch wire, 75 feet long, the "Beloit" Shake has nearly five tons less to vibrate than on the old type of machines. This makes possible the "jolt" so necessary in properly interlacing the fibres in the making of fine papers.

The New "Beloit," with its three features: *adjustable* as to pitch, *removable,* for changing wires and *shakeable* for the interlacing of fibres at increased speeds, is solving the problem of lowering costs and increasing production by superior *efficiency.*

Send for Bulletin No. 9 for further facts.

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Vol. LXXX New York, March 5, 1925 No. 10

PACIFIC COAST ASSOCIATION SUSTAINED

Word comes from San Francisco that the Pacific States Paper Trade Association's appeal from a decision rendered by the Federal Trade Commission has been sustained.

On petition to review the order issued by the Federal Trade Commission vs. Pacific States Paper Trade Association and other affiliated associations the court refused to restrict the association, as provided in the Federal Trade Commission order, in the use of their printed price lists and it is free to use them in accordance with stipulated facts, that is without combination or agreement.

The court also decided against the Commission's ruling on mill shipments, thus settling an important legal question in which every merchant in the United States was equally interested with the Association. The court says, "practically all the paper and paper products sold in the Pacific Coast States has been the subject of interstate commerce. The Commission apparently concedes that it is without power to condemn or forbid fixed prices in the state from stocks within the state, but asserts the power in this particular instance merely because of the time, place and mode of delivery. The distinction thus sought to be made is subtle, to say the least."

The third finding was in relation to the discussions of uniform terms, discounts and prices by the Northwest paper dealers and by the Pacific States Paper Trade Association. The court said, "the petitioners contend that the order by its terms prohibits any discussion whatever of these subjects. The Commission accepts that view and seeks to uphold the order in all its breadth. In this respect, we think the order goes too far." It is further said, "Not that discussion of such matters would tend to monopolize or fix prices in interstate commerce coming within the prohibition of the statute, but neither court nor Commission is justified in presuming the unlawful principle without proof." Whereupon the court says that the order is refused in so far as it forbids the mere discussion of uniform terms, discounts and prices.

NATIONAL FUND FOR CREDIT PROTECTION

The nation wide crusade against credit crooks which has just been launched by the National Association of Credit Men deserves the cooperation of representative business men throughout the country. The movement has already received the endorsement of twenty national trade associations throughout the nation.

The object of the undertaking is to raise from the honest business interests of the country and from its own membership the sum of $1,000,000 as an initial unit toward a National Fund for Credit Protection. Every cent of this initial unit is to be spent over a period of three years in investigation, detection and prosecution of credit crimes and credit crooks, which will mean the cleaning of American business, the safe-guarding of the whole structure of commerce and the teaching of business morality throughout the nation. It will mean the saving of literally hundreds of millions of dollars yearly to financial, industrial and commercial enterprises in the United States.

The plan as outlined divides the country into three major districts and calls for the establishment of a central office; proper finances; personnel and equipment to undertake all cases of commercial crime within each district. The plan makes provision for placing one or more resident investigators in almost every large commercial center throughout the country. If such a plan is successful, the very fact that it has been successful will be worth more than the million that will be raised.

The volume of credit crime throughout the country and the present national movement to check it is interesting the most prominent and influential financial and commercial minds in the country and is receiving the active cooperation of the major portion of American business.

The figures representing the losses sustained by the various intrigues and devices of the commercial crook are stupefying, to say the least, and irrespective of the particular amount that was lost last year, the increase every year shows the necessity for some radical action on the part of business men.

Something is wrong when a dishonest man with but $300 cash is able to obtain a fictitious bank balance of $10,000 and with false financial statements obtains $100,000 worth of merchandise on credit in ninety days. Something is wrong when there is an increase of 131 per cent in the commercial failures and liabilities incurred in four years, particularly when it is realized that probably from 40 to 50 per cent of these failures are tainted to a greater or smaller degree with fraud.

Conservative estimates of credit men throughout the country place the annual loss to American business through credit crime at not less than $250,000,000.

Credit crime and credit protection is a problem confronting this nation commercially. The $1,000,000 National Fund for Credit Protection has been termed one of the most prodigious undertakings for the protection of business and the safe-guarding of the moral and ethical ideas of this nation. The deterrent effect of the knowledge of relentless and certain punishment and the fact that such a plan has received the endorsement of the business enterprises of the nation will result in millions of dollars worth of good.

While the credit crook and his alley, the disreputable attorney, have been formerly watching the growth of this industry, they are

now watching and have under observation, this national fund which is being inaugurated to combat it. If this effort is made and fails, it is going to be disastrous to the business interests of this country.

The actual launching of the movement will commence with the opening of one week's intensive campaign in Philadelphia on March 23, followed by similar campaigns in Detroit and Milwaukee beginning on April 6, in New York and Indianapolis on April 13, Chicago on April 20, Cleveland on April 27, Minneapolis and St. Paul on May 4, St. Louis on May 11, Cincinnati and Boston on May 18 and Kansas City on May 25.

William H. Pouch, President of the Concrete Steel Company of New York City, is the national chairman. Members of the National Committee of the Campaign include the Presidents of fourteen Banking Institutions, the Presidents of three Chambers of Commerce, the Presidents of more than twenty-five of the Nation's leading manufacturing concerns.

Canada Exports of Pulp and Paper for January

According to a report of the Canadian Pulp and Paper Association, exports of pulp and paper for the month of January were valued at $11,269,893. In January 1924 these exports were valued at $10,900,050, so that there was an increase this year of $369,843, of which $276,000 was due to increased shipments of wood pulp and the balance due to larger exports of paper.

Details of exports under the various grades are given below:

	January, 1925		January, 1924	
Pulp:	Tons	Dollars	Tons	Dollars
Sulphate	10,182	616,463	10,949	648,021
Sulphite, bleached	14,503	1,070,744	11,686	903,410
Sulphite, unbleached	19,658	1,056,041	19,316	1,026,563
Mechanical	20,434	611,041	13,751	500,817
Total	64,777	3,354,289	55,702	3,078,811
Paper:				
News print	104,653	7,363,419	93,708	7,089,061
Wrapping	1,554	229,282	1,837	270,144
Book paper (cwts.)	1,695	15,257	1,986	13,633
Writing (cwts.)	528	5,785	1,776	20,377
Other paper	.....	301,861	.....	428,024
	.....	7,915,604	.....	7,821,239

Pulpwood exports in January amounted to 129,405 cords valued at $1,133,804 compared with 79,405 cords valued at $765,089 exported in January 1924.

For the twelve months ending January 1925 there was an increase in the value of pulp and paper exports of $2,953,043 as compared with the twelve months ending January 1924; the value of paper exports in this period showed an increase of $4,400,000 which was partly offset by a decline in the value of the pulp exports. Total pulp and paper exports for the twelve months ending January 1925 were valued at $115,164,005, made up of woodpulp valued at $15,821,143 and paper valued at $99,342,862. The main item in the exports of paper consisted of newsprint paper of which $1,230,330 tons, valued at $91,265,069 were exported in the twelve-month period.

American Writing to Pay Back Taxes

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., March 3, 1925.—Attorney Eugene A. Lynch accompanied by Tax Collector James M. Kennedy and Joseph J. Kelly, chairman of the Board of Assessors visited the New York offices of the American Writing Paper Company this week to obtain information as to how soon the city of Holyoke could expect the back taxes due of $300,000. They were told that certain legal impediments to the payment of the taxes had held them up but that they had been removed it is understood that the city may expect the back taxes about April 1.

Power Corporation May Buy International Mills

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., March 5, 1925.—The Power Corporation of New York which controls the Northern New York Utilities Inc., and its string of power plants in this part of the state, has practically completed negotiations with the International Paper Company for the purchase of the three mills and the power rights at Glen Park and Brownville. The power corporation will construct one of the largest hydro-electric power development plants in the country, which will develop more horsepower than any other plant in the state outside of Niagara Falls.

The deal is one of the biggest industrial transactions to take place in this part of the state and it involves hundreds of thousands of dollars. While it is understood that the deal has not reached the point of completion, it is practically assured that the power corporation will take over the purchases within a short time. It is said that the deal has been pending since the resignation of Philip T. Dodge as president and active head of the International Paper Company but only within the past week did the deal reach the climax.

The plan of the power corporation is to dig a canal, diverting the water of Black River at the No. 4 mill at Glen Park to the C. R. mill at Brownville. This will result in a 90 feet to 97 feet head, one of the greatest in the state and capable of developing from 25,000 to 30,000 horsepower or possibily more. The power plant will be built near the point where the canal empties back into the river. The water will be carried over the land now owned by the paper company on the South side of the river. The paper company owns all the land and the power rights between the mills and this is said to have been included in the purchase by the power company. The plans for development call for one of the most complete and modern power plants in the state.

The power thus developed at this plant will become a part of the trunk, cross state system into which the Utilities Company now transmits a vast amount of power. The cross state line is now owned by the Niagara, Lockport and Ontario Power Corporation of which Floyd L. Carlisle of the Utilities is a director. The Carlisle interests own and control the power corporation and the Utilities. The three mills of the company will also be included in the deal and it is understood that the power corporation will lease these to some manufacturing concern.

Provide for Paper Specification Committee

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 4, 1925.—The Joint Congressional Committee on Printing at a meeting on Saturday passed a resolution providing for the appointment of the Paper Specification Committee to draw up specifications for paper for the Government Printing Office for the fiscal year beginning March 1, 1926. The committee must have its report in the hands of the Joint Committee by December 8. The resolution follows:

RESOLVED, That a committee consisting of one representative each of the Bureau of Chemistry and the Bureau of Standards; three representatives of the Government Printing Office, one of whom shall be a paper expert; one representative of the Permanent Conference on Printing, and the Clerk and Inspector of the Joint Committee on Printing, be requested to prepare standard specifications and samples of paper and envelopes which it deems suitable for the public printing and binding, having due regard for economy, and submit the same, together with a proposal form and recommendations as to the standardizing, testing and use of paper and envelopes by the Government, to the Joint Committee on Printing on or before December 8, 1925, for its consideration in fixing upon standards of paper and envelopes for the different descriptions of the public printing and binding for the term of one year or six months beginning March 1, 1926.

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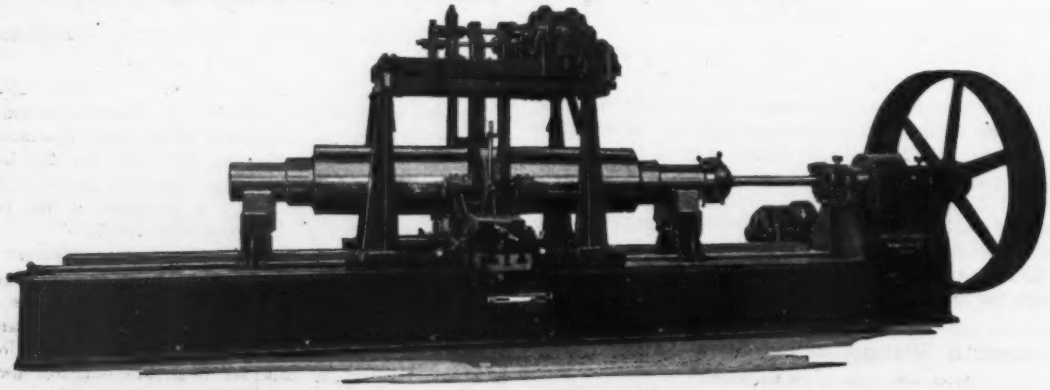

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Section of the
Technical Association of the Pulp and Paper Industry
AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.
Conducted by W.G. MacNAUGHTON, Secretary

History of the Chlorination Process for Pulp

By Dr. Paul Bartholow

The method of preparing straw and esparto pulp with chlorine, though not brought forward prominently till recently, would seem to be of much earlier origin. It is stated by a writer in Annales de L'Industrie 1830, p. 503, that the process was first applied on a commercial scale in Russia, and he quotes as authority an article in the St. Petersburg *Zeitung*. From a note in Dingler's *Polytechnisches Journal*, vol. 38, 1830, p. 157, we must conclude that it was invented by von Kurrer, who has given us a complete description of the use of chlorine water in bleaching animal and vegetable tissues. (*Ueber das Bleichen vegetabilischen und animalischen Stoffe, Dingler's Polytechnisches Journal, vol.* 8, *pp.* 51, 155, 319; *vol.* 9, *p.* 111; *vol.* 10, *p.* 191). That he was fully acquainted with the method of bleaching straw pulp with chlorine after an alkali boil we have the evidence of the Vienna manufacturer, Fischer, who patented a process of digesting straw with soda and removing the yellow color with chlorine water which was introduced into a suitable vessel, or tub. In his first work von Kurrer employed liquid chlorine (*Dingler's Polytechnisches Journal, vol.* 3, *p.* 394-407, *Ueber das Bleichen vegetabilischen Stoffe mittelst der liquiden Chlorine*). This method seems to include a good deal of modern practice. The straw or grass was first disintegrated with soda or potash, and then treated with liquid chlorine and finally washed with fresh water. (*Hermstadt's Magazin, vol.* 5, *p.* 283). At about the same time Sieber (*Dingler's Neues Journal der Farbekunst, vol.* 4), exposed the pulp to the action of nascent chlorine, but this method was not attended with success.

The Real Discovery

That the invention of the chlorination process was not the unassisted work of von Kurrer is clean from his own account of its origin. The real discovery is to be attributed to Charles Tennant and Chaptal. Tennant was the first to use the boil with caustic soda followed by bleaching with chloride of lime, and Chaptal applied chlorine to the bleaching of paper. His method was employed with the greatest success in commerce by Vialard and Heudier. Chaptal, however, if we may judge from his writings, does not appear to have used the alkali boil. In his work, La Chimie Appliquée Aux Arts, he speaks of the chemical difficulties of cooking straw. "As straw could not be wholly deprived of its yellow color with SO^2," he sought to bleach it by means of chlorine. His success in this matter was afterwards greatly extended by C. L. and A. B. Berthollet (*Blanchiment par l'acide muriatique oxygenée*, Paris, 1804). The probability seems to be that the commercial use of chlorine water started with the report of Lavoisier and Beerthollet on Chaptal's method (*Academy of Sciences, Annales de Chimie*, 1787, *vol.* 1, *p.* 67). Tennant seems to have employed cholrine gas, for his attention had been drawn to the method by Thomas Henry of Manchester, who had read the original papers of Berthollet published in the Journal de physique during the years 1785 and 1786. Henry was at that time engaged in a course of lectures on dyeing, printing and bleaching. His first operation on a large scale consisted in exposing pulps in a moist state, in airtight chambers, to the action of chlorine gas. He likewise prepared for sale a bleaching liquor, in which the gas was condensed in a week solution of potash.

Henry's Experiments

Henry's experiments in preparing bleaching liquor are of great interest. He was the first to devise a method of absorbing chlorine gas in milk of lime. Great care was necessary to prevent the formation of chlorates, and the method was found objectionable in other ways, in particular, its oxidation of the fibers. It was therefore soon laid aside. Recently, however, something very similar to it has been revived in the MacMahon process. Parkes in his Chemical Essays, vol. 4, p. 62, informs us that Watt made several improvements in the method of Berthollet. But these improvements are of very little interest today, since they relate chiefly to obsolete chemical processes. The great merit of Berthollet was that he found the methods of bleaching in a crude unfinished state, and raised them into a something like their present efficiency. He first began to bleach by means of water impregnated with chlorine, and he made use of a liquor as concentrated as possible, but he found that the fibers immersed in it were considerably injured. To prevent this effect, he agitated the goods with a large quantity of water in closed chambers into which the chlorine water was admitted. He appears to have communicated his alkaline process to Watt, who in a letter dated May 9, 1787, writes; "Je bouille la toile par avance dans une solution d'alkali faible; et, a mi-blanc, je la bouille une seconde fois. Je trouve que le savon est meilleur que l'alkali pur pour la seconde bouillon. J'ai blanchi tout-a-fait la coton, mais je ne suis encore parvenu à blanchir parfaitement la toile de lin"[1]. At what date these ideas occurred to Berthollet is uncertain, but in a paper on "oxygenated muriatic acid", read before the Academy of Sciences at Paris in

[1]Translation:—I boil the cloth first in a weak alkaline solution, and when half bleached, I boil it a second time. I find that soap is better than pure alkali for the second boiling. I have completely bleached cotton, but I have not yet succeeded in absolutely bleaching linen cloth.

April, 1785, and published in the *Journal de physique* (vol. 26, p. 325), he mentions that he had tried the effect of chlorine gas in bleaching cloth, and found that it answered perfectly. This idea is still further developed in a paper on the same subject, published in the Journal de physique for 1786.

If Watt's letter to Berthollet is considered, it seems certain that both these men were well acquainted with the main features of modern methods of bleaching, such as those of De Vains and Cataldi.

Early Knowledge of Methods

In their memoir on Chaptal's method of bleacking paper, Lavoisier and Berthollet state that thirds and blues were subjected to an alkali boil and then bleached in the chlorine water; the result was a paper of very fine quality. Chaptal's first essays with chlorine gas were not so successful, and of these Lavoiser and Berthollet say: "We think we may assert, after experiments that one of us made some time ago, that this agent is less advantageous than chlorine gas reduced to liquid form by combination with water." Von Kurrer applied this process on a mill scale and was probably the first who carried the chlorination of straw and esparto pulp into the stage which it has attained today.

A Problem on Board Quality

I have a problem from one of the members in regard to the manufacture of board to submit for suggestions as to the cause and prevention of the difficulty. Replies received will be transcribed in blank and the transcript distributed to those who participated in the discussion. The problem is as follows:

"Occasionally we have complaints because a certain order of paper will not go through the usual finishing operations without 'crimping.'

"The furnish is kraft and unbleached sulphite beaten in ordinary hollander engines seven hours, through a mammoth jordan, and formed on five-cylinder molds. The paper is then pasted two sides, printed and cut into small price tags. The 'crimp' does not appear until the customer is trimming the rolls into narrow strips after it has been pasted with a thin sheet of paper on each side. The sample may be tested by laying it on a flat surface and pushing the ends slowly together, allowing the center to rise, and noting the point at which the 'crimp' takes effect. With a good sample it was possible to bring one end of the six inch strip to 3½ inches from the other before a 'crimp' developed. A defective sample showed the 'crimp' when the ends were 4⅜ inches apart.

"We do not feel that the furnish has a great deal to do with our trouble. For instance, paper similar to the sample has been made satisfactorily several times with this furnish and with as nearly identical treatment as possible. Occasionally this complaint comes up on a sheet made from a furnish of overissues. In fact, it seems to come and go without our being able to find out just what causes the difference in the flexibility with the grain.

"Do you have any suggestions as to what might cause the trouble? For instance, would a long or short fiber, a slow or free stock have any affect? Could it be traced to the manipulation on the molds or at the presses? Would appreciate any information or sugestions."

Please send you replies within the next two weeks to W. G. MacNaughton, Secretary Technical Assaciation of the Pulp and Paper Industry.

Freight Rates Unreasonable on Waxed Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 4, 1925.—The rating on printed, waxed wrapping paper in less than carloads, between points in official territory have been found unreasonable by the Interstate Commerce Commission. Reasonable ratings have been prescribed for the future and reparation awarded.

This decision was rendered by the Commission in docket 15,580 of the General Baking Company against the Pennsylvania Railroad.

Cleaning Up a Pulpwood Storage Yard

The superintendent of this pulpwood storage yard has used excellent sanitary measures in the effort to reduce preventable decay in the yard to a minimum.

The top picture shows a condition which was once prevalent throughout the yard. Pulpwood was close-piled directly on the ground. No provision was made for air circulation to take up moisture liable to incubate decay, no attempt was made to clean up the decay-flavoring litter of bark and rubbish, and no effort was made to insure quick disposal of surface water after rain or spring thaws.

SHOWING SOME OF THE PRACTICAL WORK OF THE FOREST PRODUCTS LABORATORY

The center photographs show steps in bringing the yard to a sanitary condition—at the left the bark and debris piled for removal and at the right the manner in which the yard was graded to insure proper drainage.

The lower photograph shows the clean, practically weedless condition of the ground after the yard had been cleaned up, and the provision made for air circulation beneath the piles.

To Build Pulp Mill on Kagawong Island

TORONTO, Ont., March 2, 1925.—Fox River Pulp and Paper Company, Fox River, Wis., has let contract for construction of pulp mill on Kagawong River, Manitoulin Island. It will cost $500,000. Wood will be obtained from Manitoulin Island and pulp shipped to the company's mill at Fox River.

Testing Paper for Permeability to Liquids*

A Discussion of Some New Methods and Procedures Developed at the Bureau of Standards

By F. T. Carson[1]

Of the various properties of paper, permeability to liquids ranks perhaps next to strength in significance and bearing on the utility of this material. Some kinds of paper are required to be highly absorbent, other highly impermeable, while most papers are required to have some more or less definite degree of permeability between these two extremes. Permeability, like strength, is a generalization which has no specific meaning until certain limits are fixed and definitions formulated. A given paper may be permeable to one liquid and impermeable to another. Consequently such terms as bibulous, sized, water-resistant, water-proof, ink-resistant, grease-proof, etc., are used to indicate more or less specific degrees of permeability to specific liquids.

With few exceptions the permeability of paper to liquids cannot be determined by direct weighings in the usual manner of determining the absorption of liquids by porous bodies. Various indirect means are therefore employed. In some cases the time of transudation of a liquid is a sufficient test and in most cases it is the experimental datum of the test. In carrying out tests of permeability a considerable variety of procedures are available, particularly with reference to the manner of application of the liquid to the paper and the means of determining when the liquid has penetrated entirely through the sheet. The technique employed may determine whether the test is easy or difficult, trust-worthy or unreliable. Considerable study has been made of the permeability of paper to various liquids, resulting in the modification of existing methods and the development of new ones.

Aqueous solutions and organic liquids constitute two distinct groups in the consideration of the permeability of paper. In order to make paper resistant to aqueous solutions water-resistant materials are incorporated in the sheet in such manner that the sheet as a whole becomes water-resistant. But for the most part such sizing and waterproofing agents offer no hinderance to the permeation of paper by organic liquids. Resistance to these liquids is usually obtained through altering the character of the fibers by mechanical means, resulting in hydration, or by chemical means, resulting in hydrolysis.

A paper which has been made moderately resistant to aqueous solutions is said to be sized. But this property is rather indefinite owing to differences in behavior of aqueous solutions. The permeability of paper to aqueous solutions is greatly modified by the phenomenon of selective adsorption exhibited by cellulose fibers toward certain solutions and particularly toward the disperse phase of colloidal solutions. Some substances are strongly adsorbed from solution, others scarcely at all. Writing ink, for example, which is commonly used for testing the permeability of paper, is separated into its several constituents while being absorbed. Some of these constituents go out of solution and partially obstruct the pores, thus greatly decreasing the rate of flow of the liquid portion of the ink. The time of transudation of writing ink is, therefore, far in excess of that of water or aqueous solutions of substances which are not absorbed by cellulose. Hence it seems impossible to express degree of sizing in a manner which will accurately predict the behavior of paper toward different aqueous solutions. Since the primary objective in sizing paper is to make it resistant to wetting, the best first approximation to the degree of the sizing is a test of permeability to water. Methods for tests of this nature are being developed at the Bureau of Standards. A recent publication[2] by the writer described a sizing tester designed to apply the curl method which is carried out with the use of pure water. Determining the degree of sizing of paper is a large problem in itself, and the methods are so diverse and then phenomena sometimes so complicated that the subject cannot be discussed at length in this article, but is to be considered separately in a future publication. However, a new method which is being developed is described below. This method, like the curl method, employs water and is therefore not affected by the adsorption from solution which complicates most simple sizing tests.

A New Test for Degree of Sizing

One is a hesitant to propose a new sizing test in the face of the fact that more than twenty sizing tests are now in existence. But the very multiplicity of the tests bespeaks the inadequacy of most of them. The method here proposed supplies a real need in that it affords a simple and reliable means of measuring the time of transudation of water. It is expected to be of considerable value in the sizing research of the Bureau of Standards, both in connection with the correlation of sizing tests and in control of the sizing process.

The various simple colorimetric tests for water described in the literature which employ such indicators as anhydrous copper sulphate, cobalt chloride and dyes which change color on going into solution, are not sufficiently sensitive to give reproducible results in testing paper for the time of transudation of water. The indicator used in the new method consists essentially of a mixture of a small amount of a water-soluble dye and a much larger amount of a highly soluble but non-hydroscopic substance. The highly soluble diluent serves to maintain the dye in finely divided state, to mask its color while dry and to absorb transuded water and transfer a part of it to the dye which then develops its characteristic color in solution. The dye alone makes a poor indicator. The highly soluble medium alone will reveal the presence of transuded water by melting down into droplets, but the addition of a dye to it makes the end point more definite. There is some advantage in the use of dyes, such as methyl blue and fuchsine, which undergo a change of color on going into solution. Considerable advantage results from the use of more than one dye with contrasting colors. The procedure employed at the present time is as follows:

Three mixtures are prepared, each consisting of 1 gram of finely powdered sugar and 20 milligrams of a water soluble dye. The first contains fuchsine, the second, a green dye and the third a yellow dye. A small sieve is made of 80-mesh wire screen and a portion of each of the three mixtures of powdered sugar and dye is placed on it so that the three portions are adjacent to one another but are not mixed. (Mixing the three dyes together does not give the desired contrast but tends to give a single color when the transuded water reaches the indicator). A test specimen about two inches square is cut from the sample to be tested and the edges are folded over in order to stiffen the specimen and prevent its curling. The sieve containing the mixtures of dyes and sugar is now held above the test specimen and tapped with a pencil or a stirring rod so as to sprinkle the indicator on the surface of the test specimen. A small amount of indicator well distributed gives best results. The test specimen is now dropped on the surface of water at a definite temperature, which should be the same for all comparative tests. Simultaneously a stop-watch is set going. When all three dyes are seen to begin development of their characteristic colors the stop-watch is arrested and the time of transudation of water recorded. For papers of the same thickness this time interval is a sufficient comparative test. For papers of different thickness correction is made in each case by the approxi-

* Published by permission of the Director of the Bureau of Standards, of the U. S. Department of Commerce, Washington, D. C. Presented at the Annual Convention of TAPPI, Feb. 4, 1925.

[1] Assistant Physicist, Bureau of Standards.

[2] A New Sizing Tester for Paper, Paper Trade Journal, Oct. 23, 1924.

mate relation which states that the ratio of the time of transudation to the square of the thickness is constant for the same degree of sizing. A convenient expression for the degree is $\frac{10t}{l^2}$, where t is the time of transudation in seconds and l is the thickness of the specimen in mills. For this purpose the thickness of the test specimen after saturation is probably preferable to the thickness of the dry specimen. The question of correcting for thickness has been discussed in a previous publication[3] by the writer.

The use of three dyes having considerable contrast in color makes the end point more definite and easily determined. In case the time of transudation is greater than about a minute it is necessary to protect the exposed surface from the effect of evaporation. Otherwise the rate of evaporation may be sufficiently great as compared to the rate of transudation to retard the development of the colors and thus give rise to error. The upper surface of the specimen is protected in the manner represented in Fig. 1. A cylinder or crystallizing dish, C, of the proper height is placed in the vessel, V, and the water level adjusted so that the top of the cylinder or the open end of the crystallizing dish is just submerged. The test specimen, P, with the indicator on the upper side is laid on top of the slightly submerged support C. A glass disc, D, smaller than the test specimen, is then laid on the specimen to prevent evaporation. A beaker or crystallizing dish may be used for this purpose if nothing better is available.

With the use of the formula for thickness correction suggested above it is possible to obtain comparative numerical expressions for degree of sizing which are not unreasonable in their relative magnitudes, even in the case of such extremes of thickness as occur in a heavy ledger and a thin bond or writing. The capability of the method in this respect is even greater than that of the curl method mentioned above, which is applicable only to papers less than about a hundredth of an inch in thickness. In this connection it may be said that preliminary tests indicate a satisfactory comparison with the curl test. Another advantage of the indicator method is its capacity for revealing the degree of uniformity. By

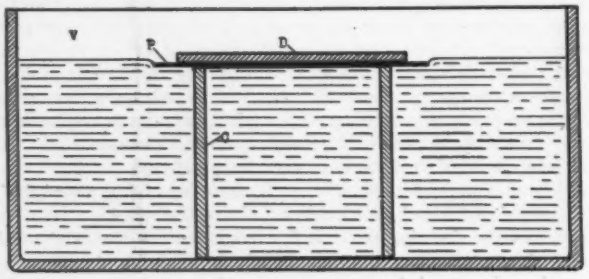

FIG. 1

Cross section illustrating method of protecting the test specimen to prevent evaporation of transuded water.

using a large test specimen, measuring several inches each way, the degree of uniformity becomes evident.

There has not yet been sufficient experimentation to determine the necessary standardization of procedure or the extent to which different individuals can duplicate one another's results. But a given individual using the indicator prepared in a definite manner can duplicate his own results easily within the normal variations in the paper being tested. The method is to be still further developed and further modifications will probably result. But it is of such value as a laboratory method that it seemed advisable to describe it at this time.

Water Resistance

Water resistance may be considered to be a special case of degree of sizing in which the liquid involved in the test is definitely specified and the time of transudation is a sufficient test. However, the terms water-resistant and water-proof usually imply a much longer time of transudation than is involved in testing degree of sizing.

The chief source of error in testing paper for water resistance has been the untrustworthiness of the means of detecting transuded moisture. This source of error has been removed by the use of a ground glass surface in contact with the paper, the ground surface adsorbing the transuded moisture and revealing it as a fugitive

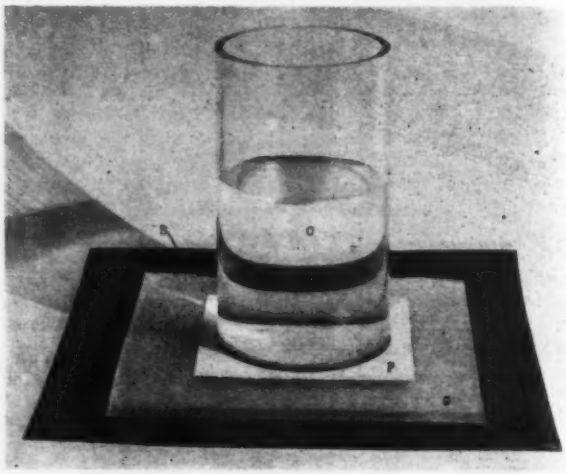

FIG. 2

Photograph illustrating the manner of testing the water resistance of paper boards.

dark patch when the specimen is lifted. This method was described in a recent publication[4] by the writer. It is desired to explain in somewhat more detail the application of this method to the testing of boards.

A shallow flat-bottomed vessel, such as the inverted cover of a can, containing sufficient paraffin to be about an eighth of an inch deep when melted is heated until the paraffin begins to "smoke." The heating is discontinued and the end of a glass cylinder is placed in the paraffin. It is allowed to remain for a few seconds until the melted paraffin is seen to be mounting up the sides of the cylinder. It is then removed, allowed to drain for an instant, and applied to the test specimen which has been laid on a smooth surface, such as a pane of glass. A weight is then placed on the cylinder and allowed to remain until the paraffin has hardened. Such a seal will hold more than a foot of water if necessary.

A piece of ground glass, G, (Fig. 2) is laid on a piece of black paper, B, or other dark surface, the ground surface of the glass being uppermost. The specimen, P, sealed to the cylinder, C, is placed on the ground surface. An inch or two of water is poured into the cylinder. The capillary pressure in pores as small as those in paper is so great as compared with the hydrostatic pressure that the head is immaterial so long as it is small. At intervals the cylinder is lifted and any transuded moisture will show as a dark fugitive patch on the ground surface.

While all the tests described in this publication are rather sensitive to differences in temperature, the ground glass method is particularly so, not only because of the change in viscosity of the liquid, but also because of the effect of temperature on the sensitivity of the ground glass surface. The moisture is retained by adsorption and adsorption is increased as the temperature falls. For this reason it seems desirable to keep the ground glass at as low a temperature as is convenient. However, it is true that if the ground glass is colder than the air of the room the relative humidity of the entrapped air film will be increased. This will cause condensation by adsorption to set in more rapidly. Some further in-

[3]The Determination of Sizing Quality, Paper Trade Journal, April 6, 1922.

[4]Testing Waterproofed Paper, Paper Trade Journal, September 4, 1924.

vestigation of this method is desirable in order to standardize the procedure.

A simple method of keeping the ground glass at a sufficiently constant temperature is to paint the smooth side black and support it in large vessel of water so that it is partially submerged, in very much the same manner employed in supporting the test specimen and cover in the sizing test illustrated in Fig. 1. The large body of water will remain at a fairly constant temperature for a considerable period of time, especially if no part of the surface of the water is exposed to evaporation.

The indicator sizing test described above is also applicable to the testing of water resistant papers. It is necessary, however to take especial precaution to protect the upper surface to prevent any evaporation of transuded water.

Testing Bibulous Papers

At the other extreme from sized and waterproofed paper is absorbent or bibulous paper. The testing of such materials as paper towels and blotting paper has not been standardized. The problem is beset with some of the same difficulties encountered in testing sized papers and tests must be carried out with proper regard to the use of the paper under consideration. There is one decided advantage in testing offered by this type of paper as compared to sized paper. It is possible to determine the rate of absorption by direct observation, which fact makes possible a fairly uniform technique for various aqueous solutions. The methods best known are the mounting test of Klemm[5] and the pipette test of Reed[6]. A very useful method, especially for the thinner papers, is the pipette test modified so as to deliver very small quantities of liquid. Instead of delivering the liquid by successive drops a single drop of measured size is applied by the following procedure: A 1 cubic centimeter Mohr pipette is held at an angle of about thirty degrees with the surface of the paper, the tip being almost in contact with the paper and remaining in the drop of liquid which is being delivered until delivery is complete. In this manner as little as 0.05 cubic centimeter can be delivered without serious error. This procedure has been applied quite successfully in testing paper towels. In testing blotting paper proper consideration has not been given to the fact that a blotter must absorb ink repeatedly in the same spot. A supplementary test for this property of blotting paper should be devised.

Resistance of Paper to Organic Liquids—Testing Printing and Grease-Proofed Papers

There are two important classes of paper in which permeability to organic liquids is especially significant. One is the so-called greaseproof or greaseproof wrapping which is used extensively as a protective covering for food products. The other is the very large class of paper used in printing. If paper of the latter class is too absorbent of oils the oily printing ink will strike through and show on the reverse side. On the other hand, if it is not sufficiently absorbent the ink will dry slowly and will be liable to offset. Contrary to a widespread belief, the degree of rosin sizing of paper has no direct bearing on its printing quality. A hard sized book paper and the same paper deprived of all sizing by extraction absorb turpentine or linseed oil at exactly the same rate. The control of sizing in printing papers is justified by the effect on strength, uniformity and other properties only indirectly related to printing quality. The testing of printing papers for permeability to oily media is considered abroad to be of great importance. There seems to have been no attempt in this country, however, to make use of such a test. The simplest test of this nature which has been proposed is that described by Rendall[7]. This consists in noting the time required for turpentine, when dropped on a sheet of printing paper, to form a uniform patch. However, the time interval is too short to be accurately gauged when turpentine is used. Possibly a viscous oil could be more advantageously employed. It has been observed that in the case of the ordinary weights of paper the patch becomes uniform coincidently with transudation of the organic liquid. It is obvious, therefore, that in order to express the rate of penetration a correction must be made for the thickness of the sheet. This should offer no difficulty for, since paper is not expanded by the absorption of organic liquids of small surface tension, the laws of capillary dynamics applicable to pure liquids in porous bodies should hold rigidly. That is, the time of transudation should vary as the square of the thickness of the sheet. There is opportunity here for the development of a valuable testing method.

One of the chief difficulties encountered in testing greaseproofed papers is the lack of constancy of the physical properties of the animal and vegetable oils with which these papers are apt to come in contact. There is a lack of assurance that tests performed at different times are comparable as it is difficult to find such an oil having sufficiently constant physical properties to permit of its use as a standard. The most common liquids used in testing greaseproofed paper are turpentine and oleic acid, both of which are chemically dissimilar to the oils referred to above. Turpentine seems the more preferable since oleic acid deteriorates considerably with age. The validity of testing greaseproofed paper with liquids other than animal and vegetable oils is an open question. However, paper of the nature of greaseproofed paper is resistant to practically all ordinary organic solvents, oils and similar liquids. It would, indeed, be a fortunate state of affairs if it should be found that the rate of flow of such liquids through a given paper depends only upon the physical constants of the liquids and not upon such chemicals and physico-chemical phenomena as those which affect the rate of flow of aqueous solutions through paper. There is urgent need of an investigation to learn whether or not the various common organic solvents, vegetable oils, mineral oils, etc., classify a series of greaseproofed and parchment papers in the same manner, in order to determine the validity of testing such papers with organic liquids other than animal and vegetable oils.

For comparative tests of two greaseproofed paper the method of Herzberg[8] is to be recommended. A thin film of lard or other fat is spread on one specimen and covered by the second specimen which is to be compared with the first. The sandwich thus formed is placed between two sheets of writing paper and the whole secured between two panes of glass held togethr under slight pressure by rubber bands. By observing at intervals the relative amount of oil which has stained each sheet of writing paper a good comparative test is had. It is obvious that this method has its limitations, the chief of which is that no numerical value is obtained.

The principal difficulty in the technique of testing greaseproofed paper has been the lack of a satisfactory means of applying the oil or other organic liquids to the paper. Such liquids, owing to their low surface tension, quickly spread out into a thin film, often running over the edges of the specimen and leaving insufficient liquid in place to give an adequate test. Similarly, if the specimen is floated the liquid runs over the edges and covers the upper surface in a short time. Even when the specimen is formed into a receptacle having high walls the organic liquid rapidly creeps up the sides, over the top and down inside. Altogether such a test is vexatious and unsatisfactory.

These difficulties have been overcome and the test greatly facilitated in a method developed at the Bureau of Standards. The technique is similar to that of testing water resistance by the ground glass method. The test specimen is sealed to the end of a glass cylinder with a substance which is not readily wetted by organic liquids. A very thick, viscous sirup is most satisfactory for the purpose. Glue will serve as well when the sirup is not at hand. The specimen is sealed to the cylinder in much the same manner as that described above in connection with the test for water resistance.

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[5] Handbuch der *Papierkunde*.
[6] Determining the Absorbency of Paper, *Paper*, January 16, 1918.
[7] Paper Makers' Monthly Journal, Vol. LXIII, No. 1, p. 19, (Jan. 15, 1925.)
[8] *Papierprüfung*, 5th Edition, p. 168.

The end of the cylinder is touched to the surface of the sirup and then applied to the test specimen. A seal made in this manner will withstand organic liquids indefinitely.

The actual test may be carried out in several ways. An oil-soluble dye may be dissolved in turpentine or oil which is then poured into the cylinder, the specimen being placed on a piece of white paper and lifted periodically to observe any spots,—in the manner recommended by Smith[9]. In this case it is an advantage to cut a strip a few inches long from the sample to be tested. The cylinder is sealed to one end of the strip with sirup (or glue) and a weight is placed on the other end. By this means the specimen is always replaced in exactly the same position after being lifted to observe the white paper underneath. In testing with turpentine or other volatile organic liquids it is preferable instead of using white paper underneath the specimen to use a ground glass surface as in the test for water resistance.

A better method is to reverse the process and set the specimen which has been sealed to the cylinder, in a shallow glass vessel containing the organic liquid, in order that the specimen may be viewed from above. This method is illustrated in Fig. 3.

A piece of heavy cardboard, B, having a hole, H, in the middle is supported on a ring-stand. The crystallizing dish, D, containing the organic liquid is placed over the hole. The test specimen, P, sealed to the cylinder, C, is placed in the organic liquid in the crystallizing dish. A rotating mirror, M, pivoted at O, is mounted directly underneath the hole, H. The test is carried out near a window or a good artificial light giving satisfactory illumination of both the mirror and the upper surface of the specimen. The organic liquid penetrating through the sheet becomes visible alternately as light and dark spots as the mirror is oscillated. The experimental datum is the time interval until transudation is noted.

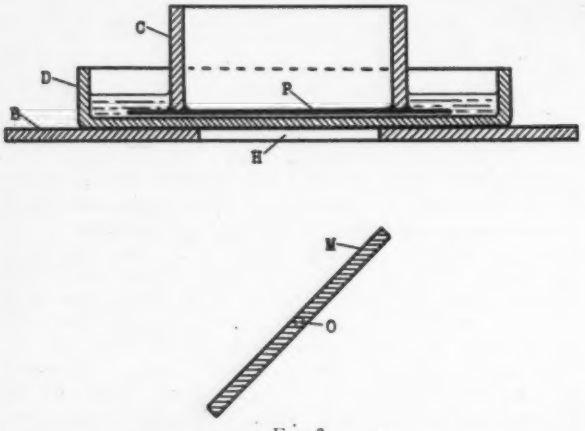


FIG. 3
Cross section of apparatus used for testing greaseproofed paper.

Summary

Some of the necessary considerations in testing the permeability of paper are pointed out in a discussion of different kinds of paper and their relation to liquids and solutions of various characters.

A new sizing test is described which employs an indicator composed of powdered sugar and one or more dyes.

The application of the ground glass method to the testing of boards is described in detail, including a discussion of the effect of temperature on the sensitivity of the ground glass surface.

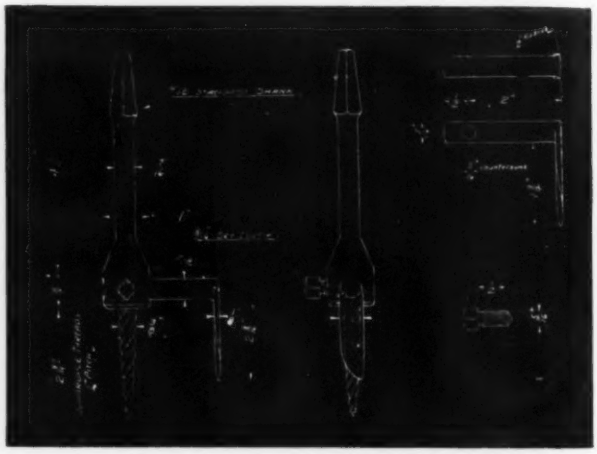
A modification of the pipette test for bibulous paper is outlined. Small amounts of water are delivered from a Mohr pipette by allowing the tip to remain in the water until completely delivered.

A new method is described for testing greaseproofed paper. The test specimen is sealed to a glass cylinder with sirup or glue, placed in the oil or other organic testing medium and viewed from above by transmitted light. The transuded liquid appears in spots, alternately light and dark, as a mirror oscillates underneath.

[9]The Turpentine Penetration Test for Grease-proof Papers, Technical Association Papers, Series VII, No. 1, (June 1924), p. 23.

New Auger for Sampling Pulp Proves Practical

A pulp borer or auger which is now being made by the Irwin Auger Bit Company of Wilmington, Ohio, is being received with



NEW AUGER FOR SAMPLING PULP

open arms by chemists who it is said have had a hard time in finding an instrument of the kind that was precisely adequate to their needs. Incidentally there is quite an interesting story connected with the development of this borer.

A pulp borer which was extensively used and which gave general satisfaction was formerly made by the Miller Falls Machine Company of Miller Falls, Mass. Some time ago that concern went out of business and with it passed the borer, leaving the chemists high and dry without a substitute that seemed to them to exactly fill the bill.

Much annoyance was caused and the problem became so great that a special committee was appointed about a year ago to see what they could do in solving the problem. This committee was composed of one member of the American Paper and Pulp Association, one from the Technical Association and one from the Association of American Wood Pulp Importers. After looking the ground over carefully and satisfying themselves that there was nothing available that was just what was wanted, they turned their attention to the matter of having a proper borer manufactured. The committee succeeded in interesting several manufacturing companies in the matter with the result that they all began experimenting to develop a borer that would meet all requirements.

The Irwin Auger Bit Company finally produced a borer which was submitted to an exacting test and it was found that it would do everything that could reasonably be required of such an instrument. The result is that the Irwin company is now manufacturing the borer which is daily proving that it has really come to fill a long felt want.

Acquires Additional Timber Limits

The Porcupine Pulp and Lumber Company, Hoyle, Ont., which is a subsidiary concern of the Cliff Paper Company, Niagara Falls, N. Y., has within the past few months purchased a large amount of standing timber, all black spruce and will double its annual cut.

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Papierfabr. 22, No. 35, 397-401 (Aug. 31, 1924).

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Allen, A. W.

Making felt from waste.
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How to run felts most efficiently.
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Papierfabr. 22, No. 45, 533-534 (Nov. 9, 1924).

Factors affecting the life of canvas dryer felts.
Paper 34, No. 25, 1158 (Oct. 9, 1924); Making Paper, Aug., 1924.

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Use and abuse of paper making felts.
Paper Mill 48, No. 21, 32 (May 24, 1924).

Haven, Geo. B.

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Knapp, A. G.

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Paper 35, No. 1, 5-7 (Oct. 23, 1924).

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Paper machine felts and press rolls.
Wochbl. Papierfabr. 55, No. 10, 519-521 (Mar. 8, 1924); Paper 33, No. 26, 174, 176 (Apr. 17, 1924); T. S. 79, 158.

Rees, E. A.

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Making Paper 7, No. 5, 130-134 (Nov., 1924).

Thoughts on felt usage.

Paper Mill 48, No. 11, 28, 30 (Mar. 15, 1924); Making Paper 6, No. 9, 260-263 (Mar., 1924).

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Constancy in the art of paper making.
Pulp Paper Mag. Can. 22, No. 8, 223-225 (Feb. 21, 1924).

Vickery, F. W.

Press felts.
Paper Ind. 6, 549-553 (June, 1924); Paper Mill 48, No. 21, 56, 58 (May 24, 1924); T. S. 79, 236.

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Loading materials for paper.
Paper Making 43, No. 3, 157 (Mar., 1924).

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The use of Canadian talc in paper making.
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Pappers-Och Trävar för Finland, Dec. 15, 1923; Pulp Paper Mag. Can. 22, No. 40, 1022-1023 (Oct. 2, 1924); C. A. 18, 3716.

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Papierfabr. 21, 541-544 (1923); Paper 33, No. 12, 13-14 (Jan. 10, 1924); C. A. 18, 1049.

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Wochbl. Papierfabr. 55, No. 45, 2881-2882 (Nov. 15, 1924).

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Papierfabr. 22, No. 28, 318-319 (July 13, 1924); C. A. 18, 2692.

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Size and character of grains of nonmetallic mineral fillers.
U. S. Bur. Mines, Tech. Paper No. 296. 1924. 44 p.
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BARK AS A FUEL

Bean, H. D.

Wet bark as fuel.
Pulp Paper Mag Can. 22, No. 47, 1179-1182 (Nov. 20, 1924).

Bearce, George D.

Bark driers and refuse burning.
Paper Trade J. 79, No. 3, 39-40 (July 17, 1924); Tech. Assoc. Papers 7, 60-61 (1924); T. S. 79, 236.

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Refuse burning and bark driers.
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Utilization of pulp wood bark as fuel.
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Taylor, A. J. T.

Dark driers and refuse burning.
Paper Trade J. 79, No. 25, 54 (Dec. 18, 1924).

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Pulverized fuel.
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Fuel economy by the use of more efficient methods in the production of steam.
Papier 26, 1285-1288, 1411-1414 (Nov., Dec., 1923); 27, 49-52 (Jan., 1924); C. A. 18, 1374; T. S. 79, 115.

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World's Paper Trade Rev. 81, No. 11, 870, 872, 874 (Mar. 14, 1924).

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Papeterie 46, 494-502 (June 10, 1924); T. S. 79, 207; C. A. 18, 2908.

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Pulverized coal—the unit system.
Paper Mill 48, No. 19, 10, 46 (May 10, 1924).

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Pulverized fuel for the paper mill.
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Efficient utilization of fuel oil.
Paper Ind. 5, No. 10, 1572-1575 (Jan., 1924).

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Heat economy in the paper industry.
Papierfabr, 21, Fest- u. Ausland Heft, 84-96 (June 9, 1924); T. S. 78, 21.

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Heat economy in the pulp industry.
Wochbl. Papierfabr. 55, No. 43, 2734-2736 (Oct. 18, 1924).

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Heat economy in paper and pulp mills.
Bum. Prom. 2, No. 5, 551-570 (Sept., Oct., 1923); C. A. 18, 2076; T. S. 49, 147.

Frankenbach, H.

Heat economy in the pulp industry.
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v. Lassberg.

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Papierfabr. 22, No. 40, 461-472 (Oct. 5, 1924); Paper Trade J. 79, No. 24, 45-49; No. 25, 49-54 (Dec. 11, 18, 1924).

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Heat economy in the pulp industry.
Wochbl. Papierfabr. 55, No. 49, 3162-3163 (Dec. 6, 1924).

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Heat economy in the sulphite cooking process.
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Heat problems in the pulp mill.
Zellstoff u. Papier 4, No. 9, 224-228 (Sept., 1924).

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Paper Mill 48, No. 15, 105 ff. (Apr. 12, 1924).)

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See also Straw.

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The hygiene of the pulp and paper industry.
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The kollergang.
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Wochbl. Papierfabr. 55, 217-228 (Feb. 2, 1924); T. S. 79, 96.

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Kraft pulp and paper industry.
Paper Mill 48, No. 18, 16 (May 3, 1924); Paper 34, No. 6, 249 (May 29, 1924); Paper Ind. 6, No. 3, 535 (June, 1924).

McBain, B. T.

Kraft, true and imitation.
Paper 34, No. 24, 1086-1087 (Oct. 2, 1924); Paper Making 43, 502 (Sept., 1924).

Schwalbe, C. G.

The strength of kraft paper.
Paper Mill 48, No. 1, 32 (Jan. 5, 1924).

Sherriff, W. H.

Kraft as a printing paper.
Paper Making 43, No. 4, 189-190 (Apr., 1924).

Stevens, R. H.

Kraft paper in the South.
Paper 34, No. 4, 133-136 (May 15, 1924); C. A. 18, 3272; T. S. 79, 172.

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Paper 34, No. 18, 795-797 (Aug. 21, 1924).

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Testing and research laboratory of the French school of paper making.
Recherches et invention, 1924, 439-443; C. A. 18, 1906; T. S. 79, 172.

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Forest Products Laboratories of Canada, 1923.
Pulp Paper Mag. Can. 22, 847, 857-858 (1924); C. A. 18, 3271.

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European paper laboratories.
Paper Trade J. 79, No. 11, 48 (Sept. 11, 1924); Pulp Paper Mag. Can. 22, No. 39, 992, 1006 (Sept. 25, 1924).

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New principles in paper mill illumination.
Paper Ind. 6, No. 3, 498-501 (June, 1924); World's Paper Trade Rev. 82, No. 7, 526 (Aug. 15, 1924).

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Beckmann, Ernst, Liesche, Otto, and Lehmann, Fritz.

Qualitative and quantitative differences between some wood and straw lignins.
Biochem. Z. 139, 491-508 (1923); T. S. 78, 50.

Cross C. F., and Engelstad, A.

Action of aqueous sulphurous acid on lignocellulose.
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(*To be continued*)

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Clarence J. West, Chairman

Beating

Jordan Engine. W. E. Pettingill, assignor to Bird & Son, Inc. U. S. pat. 1,468,681, Mar. 11, 1924. With the usual method of feeding the stock radially at the small end of the engine, when the blades wear down and the plug is removed endwise to compensate for such wear, the size of the openings between the blades becomes smaller and the degree of feed is proportionally reduced. The invention overcomes this by placing the feed pipe at a tangent to the circumference of the plug, and at the same time moving it at some distance from the head of the machine. This is claimed to increase the life of the bars or knives, decrease power consumption, double the capacity of the jordan, and allow of handling relatively rough, half-beaten stock, so that the stock need not be reduced in the beaters so far as with the present arrangement of the feed. The machine produces a free working stock, but refines it sufficiently for handling in the usual screens.—A. P.-C.

Beater. D. C. Davis. U. S. pat. 1,488,477, Apr. 1, 1924. The lighter bars are supported in posts or pedestals which are vertically slotted to receive the ends of the bars. Hanger rods adjustably supported in the posts, pass through holes in the extremities of the lighter bars, which rest on springs attached to the lower ends of the hanger rods. The shaft with hand wheel and worms at both ends is provided so that corresponding ends of the lighter bars may be adjusted simultaneously. This construction allows of accurate adjustment of the position of the roll relative to the bedplate, and at the same time the parts are not likely to be injured by the passing of an obstruction through the engine.—A. P.-C.

New Form of Beater. R. J. Serpas. U. S. pat. 1,491,826, Apr. 29, 1924. The tank or trough is provided with two rolls, one at each end, and one considerably larger than the other. The ends of the tank are curved and concentric with the respective rolls. The bottom is inclined, and between the rolls is a horizontal partition or midrib inclined in a direction opposite to that of the bottom of the tank. The rolls are mounted in fixed bearings, and each roll coacts with two bedplates, which are adjustably or yieldably mounted, the pressure with which they press against the rolls being regulated by means of coiled springs.—A. P.-C.

Beating Engine. W. Rubus, assignor to R. J. Marx. U. S. pat. 1,474,442, Nov. 20, 1923. The trough is made spiral-shaped and with a uniform fall or gradient from beginning to end, and the midfeather is suitably curved and substantially annular. The roll rotates in a box shaped extension of the trough. In order to ensure a thorough mixing of the stuff, the spiral channel is provided with a short partition immediately in front of the roll where the stock is discharged into it thereby dividing the stock at the beginning of the trough into two streams. In this way the stock which was inside next to the midfeather is discharged from the roll on the outside of the trough, and vice versa. This construction accelerates the speed of circulation, and allows of beating stock at a higher consistency than with the usual type of beater.—A. P.-C.

Beater. Charles L. Keller, assignor to The Richarson Company. U. S. pat. 1,485,416, Mar. 4, 1924. The grafflin beater resembles in construction the swing hammer pulverizer, and is claimed to give results equal or superior in quality to that obtained by the ordinary beater and jordan refiner. With the high speed used, however, the water is forced from the fibrous material through the screen leaving a relatively dry mass which very quickly blocks the passage of the material through the screen. Increasing the moisture content of the stock does not improve conditions, and it is necessary to control the outflow of water so that it will be proportional to the rate of discharge of the fibers. This is accomplished by providing a water gate of adjustable height, so that the pumping out action of the swing hammer device cannot leave the pulped fibers in a relatively dry condition. A doctor or scraper is provided to clean the under side of the screen so as to pull or suck through such fibers as are pulped but catch on the walls of the screen slots.—A. P.-C.

Sectional Beater Roll. G. R. Hanks, S. Apgar, A. R. Bench and G. L. Bidwell, assignors to Taylor-Wharton Iron & Steel Co. U. S. pat. 1,479,383, Jan. 1, 1924. The roll is of manganese steel; but as the casting of large pieces offers serious difficulties, the roll is cast in sections which are in all particulars identical and therefore interchangeable. This has the further advantage that the same castings can be used for building rolls of various lengths.A. P.-C.

Integral Beater Roll. G. R. Hanks, S. Apgar, A. R. Bench and G. L. Bidwell, assignors to Taylor-Wharton Iron & Steel Co. U. S. pat. 1,479,382, Jan. 1, 1924. The beater roll, exclusive of end plates, but inclusive of the knife-carrying cylinder or roll, the spiders and the hubs or shaft receiving elements, is formed of a single casting, preferably of manganese steel. The knife-carrying cylinder is formed with a pair of spiders terminating in sleeve-like extensions constituting the hub elements for the reception of the usual shaft. Each of the hub elements is provided with one or more key seats whereby it may be locked to the shaft. The cylinder is reinforced by radial ribs and by longitudinal ribs; and the cylinder and spiders are additionally reinforced by radially disposed webs, which also constitute abutments for the end plates.—A. P.-C.

Beating and Refining Engine. Sheldon Leicester. Eng. pat. 216,974, March 23, 1923. The machine consists of a conical, cast steel or phosphor bronze rotor with apex at the top, mounted on a vertical steel shaft on roller and thrust ball bearings, and fixed, that is, not vertically adjustable. Adjustable ring bedplates of steel, bronze, stone or other suitable material, each individually regulated and conforming to the shape of the rotor, can be raised or lowered with micrometer adjustment, so that varying degrees of fraying, hydrating and cutting can be obtained. Both rotor and bedplates are veined, and the rotor is driven by a variable speed motor, so that the friction of the stuff as it is thrown against the bedplates can be increased or decreased. The rotor and bedplates are hollow to allow of cooling with air or with water.—A. P.-C.

Washing Pulp and Beating Stock for Paper. Martin L. Griffin. *Paper Mill* 48, No. 32, 16, 38 (Aug. 9, 1924). A criticism of recent articles by J. W. Brassington on the use of centrifugal force for separation of digester liquor from pulp and for beating paper stock.—A. P.-C.

Refiner. Charles Baeder. Fr. pat. 565,708. A cone with knives of steel, bronze or basalt lava is mounted to rotate within a casing provided with similar knives. The cone is keyed to a sleeve, which in turn is splined to the shaft so as to rotate with the latter and at the same time be adjustable longitudinally. The cone is hollow and open at the small end, which is the feed end. This construction compels the stock to pass between the two sets of knives to be cut.—A. P.-C.

Beater Economy. Silesius. *Wochbl. Papierfabr.* 55, 35-48 (June 14, 1924). A comprehensive, technical article on the economy and efficiency of the new types of beaters.—J. L. P.

The Beating Test. Paul Klemm. *Wochbl. Papierfabr.* 55, 100-103 (June 14, 1924). A timely discussion of the various tests for the beater consistency. The various forms of sedimentation testers are reviewed and the newer method of determining the degree of hydration or swelling of the fibers is mentioned. The most significant test is a microscopical examination of the stock, by which

the fiber length can be ascertained and the nature of the fiber better understood. A projection microscope is recommended for the purpose; the time required for the preparation of the sample does not exceed one minute.—J. L. P.

Rapid Method for Determining the Degree of Beating. P. M. Hoffmann Jacobsen. *Svensk Pappers Tid.* No. 22, (1923); *Papierfabr.* 22, 265-270 (June 15, 1924). A new method is described for the evaluation of the beating of pulp and can be carried out in about half a minute. The method consists in lifting a 25 cm. metal measuring stick, at an angle of 45°, through the beaten stock at the speed of 8 to 10 m. per second. The stock collecting on the blade of the stick is removed in a given manner and weighed in grams. The sum of four such measurements gives the amount of wet stock collected on a meter of surface. The test is practically independent of the consistency of the stock. Curves are shown giving the relationship between fiber length and the measured value. The effect of adding fillers is shown, and comparison is made with other methods of determining the degree of beating. The article consists essentially of experimental data.—J. L. P.

Studies on Properties of Paper. P. M. Hoffmann Jacobsen. *Svensk Pappers Tid.* No. 23 (1923); *Papierfabr.* 22, 277-284 (June 22, 1924). The influence of beating on the properties of paper, as determined by physical tests, are described. The paper was made from bleached pulp which was given two different degrees of beating. Before testing the sheets were air dried and seasoned at 5 per cent relative humidity and at 18° C. The results are shown in a series of diagrams. With the diminuation in the length of the fiber by beating the following tests on the resulting paper gave increased values: tearing length, per cent felting, per cent stretch, and folding endurance. In general a maximum was reached rather promptly. Careful beating, extending over a long period of time, yields a sheet which is superior to that made from rapidly beaten pulp. Instead of tearing length, the term breaking length is preferable. A suggestive list of problems relating to paper are listed in the article.—J. L. P.

Bleaching

Preparation of Bleaching Liquors From Liquid Chlorine. James H. MacMahon. *Paper Mill* 48, No. 33, 12, 14, 16 (Aug. 16, 1924). A description of the Mathieson system of bleach preparation. —A. P.-C.

Canadian Salt Co.'s Process for Manufacture of Alkali-Chlorine Products. D. A. Pritchard and G. E. Gollop. *Can. Chem. Met.* 8, 210-214 (Sept., 1924); *Ind. Eng. Chem.* 16, 1056-1062 (Oct., 1924). A description of the main features of the plant, including brine purification, operation of the Gibbs electrolytic cells, operation of the double-effect Scott evaporators, finishing the caustic, and manufacture of liquid chlorine and of bleaching powder.—A. P.-C.

Method of and Apparatus for Making Bleach Liquor. J. R. MacMillan, assignor to Electro Bleaching Gas Co. U. S. pat. 1,483,463, Feb. 12, 1924. In the chlorination of milk of lime in towers, the rate of the reaction decreases as the degree of chlorination increases, and there is danger of secondary reactions, such as production of chlorates. For mechanical reasons it is not readily feasible to vary the rate of feeding the chlorine according to the degree of chlorination of the lime, nor to vary the speed of the liquor-circulating pump. In order to absorb the chlorine more rapidly, thereby diminishing the danger of the local development of acidity, formation of chlorates, etc., a small additional flow of alkaline liquor, preferably milk of lime, is led into the tower at a point adjacent to the point of introduction of the chlorine gas.—A. P.-C.

Purifying Brine for Electrolysis. H. H. Hanson, J. T. Leecock and C. A. Blodgett, assignors to Eastern Manufacturing Co. U. S. pat. 1,500,126, July 8, 1924. In washing the salt crystals obtained on evaporation of the caustic soda solution from the cells, a less complete removal of caustic than usual is practiced, so that the reclaimed brine is more alkaline than is customary. When this is added to fresh brine magnesia is precipitated as hydroxide. Carbon dioxide (cleaned flue gas) is then passed into the brine, precipitating calcium carbonate. After filtering, chlorine is used instead of hydrochloric acid to effect neutralization. An advantage is that ferrous iron is oxidized to the less soluble ferric state so that it may be filtered out, thus removing an agent that tends progressively to clog the electrolytic cell diaphragms. Omitting the last stages af washing has the further advantage of leaving the caustic solution more concentrated and less contaminated. The cost of the residual caustic is less than the price of equivalent soda ash. —A. P.-C.

Bleaching of Wood Pulp. III. The Effect of Temperature on the Bleaching of Sulphite Pulp. C. E. Curran and P. K. Baird. *Paper Trade J.* 79, No. 11, 45-47 (Sept. 11, 1924). The results of experiments which are described and discussed show that: the rate of bleach consumption appears as a linear function of the logarithm of the time during the main course of the reaction and (probably) within temperature limits of 0° to 50° C.; the final color of the pulp is largely independent of bleaching temperature; color changes in equivalent periods of time of bleaching at different temperatures are approximately the same; no definite relation has been observed between rate of bleach consumption and rate of color change; the shrinkage was slightly greater at high than at lower temperatures; most of the bleach (90 per cent) is consumed very rapidly (40 per cent of the total bleaching time), but a considerable proportion of the whitening takes place towards the end during the consumption of the final 10 per cent of bleach.—A. P.-C.

Bleaching of Groundwood. Teicher. *Zellstoff U. Papier* 4, 187-189 (Aug., 1924). A general article on the use of chloride of lime and also sulphur dioxide or a sulphite in the bleaching of ground wood. Twenty-eight parts of chloride of lime are used for bleaching 100 parts of ground wood as carried out in a hollander for 2.5 hours. On the other hand 2.5 parts of a 38° Bé. solution of sodium bisulphite are sufficient to bleach 100 parts of groundwood, but the white color is not permanent. The corrosion of metals by the chemicals is discussed.—J. L. P.

In the Pulp Bleach Room. Max Muller. *Wochbl. Papierfabr.* 55, 31-35 (June 14, 1924). A review of recent developments in methods and apparatus for the bleaching of pulp.—J. L. P.

The Bleaching Process. Georg Schinkel. *Wochbl. Papierfabr.* 55, 51-53 (Aug., 1924). The use of the bleaching hollander and the washing drum is discussed. From a standpoint of economy there is a saving in time, power and fiber loss.—J. L. P.

Process and Device for Bleaching Pulp. Paolo Souchon. Ger. pat. 397,51. *Papierfabr.* 22, 347-348 (July 27, 1924). Of the different chemicals required for bleaching wood pulp only one is introduced into each bleaching vat. The vats connected and are provided with a circulation device.—J. L. P.

Pulp Bleaching Process. V. Drewsen, assignor to West Virginia Pulp & Paper Co. U. S. pat. 1,500,378, July 8, 1924. Washed sulphite pulp suspended in water is treated with chlorine and agitated. The chlorination product thus formed is washed out and the fiber is given an after bleaching with bleaching powder.—A. P.-C.

Sizing

Sizing Paper With Rosin. E. Sutermeister. *Am. Dyestuff Rept.* 13, 513-516, 548-552 (1924). The variable factors influencing the results from the use of rosin size are listed in 23 particulars under the following headings: preparation of sizing materials, operations in the beater and on the paper machine. These factors are severally discussed. The results thus far obtained by individual experimenters have been contradictory as would be expected considering the many factors involved. The enormous amount of work necessary to bring about a satisfactory conclusion adequate studies of this problem, is beyond the scope of a commercial or manufacturing laboratory and indicates a government or university laboratory as the proper place in which to carry out such studies.—C. J. W.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

Steam and White Water Losses*

By G. A. Ware, Assistant Secretary, Newsprint Service Bureau

Mr. McNaughton: I believe we all see from Mr. Bearce's talk the absolute necessity for measuring equipment in order to determine not only the amount of material used, the amount of product made but where the material used goes to. In the steam plant, it is an absolute necessity if the figures are going to be of any importance that there be some equipment for measuring the amount of steam made and also equally important, the amount of steam used in various large departments. As Mr. Bearce has shown, the figures that his Bureau has been getting on the steam plant costs and efficiency, seem to make it advisable to increase the degree of analysis so that whereas for example the amount of steam used outside of the sulphite mill and the paper mill as a whole is ascertained that the paper mill use of steam be analyzed still further into the steam used for drying and steam used for ventilating. It is somewhat the same as any person who is operating on an expense account. The department that checks those expense accounts, if they are wise, object to large items for sundries. They have a limit to the amount that maybe bulked into sundries. They must have it analyzed in order to be able to tell where the money goes. When the amount of money runs into the tens of thousands of dollars for any one mill and sometimes as Bearce has shown, hundreds of thousands, how necessary it is that the accountants demand and keep on impressing the demands that these should be analyzed and should be capable of being analyzed. It is up to the operating end to find out a method for presenting that analysis.

The subject will still further be treated by Mr. Ware, the other side of the Newsprint Service Bureau that represents the accurate mathematical analysis.

Mr. Ware: All of this gentlemen, impresses upon us the need, as Miss Kiely told us the other day, for standards and measurements of performance and not only must we have those standards but we must check them up continuously, and keep them up to date or they will not serve the purpose for which they are intended.

There are various incentives that start a movement for better operating and cost accounting methods. These incentives may come from within a mill. When an organization finds that it is up against a business depression and their officers demand greater efficiency at lower cost. Then again, there may be some outside agency which, forces an industry to see the necessity for better methods. The Newsprint industry is an example of that. At the time of the Government investigation into the cost of manufacturing newsprint paper during the war, correct costs were needed under the price-fixing scheme of the Government and the figures were checked back and forth. The accounting departments of the Mills were overworked through the visits of numerous outside accountants and with what result? They found their methods previously had been inadequate and they had incentives to improve in them.

Now it matters not whether the incentive comes from within or from the outside agency, the great point is to make a start and then keep going, when once the movement is commenced. None of us can subsist by ourselves. If any one of us attempts to go about our business as an individual, apart from others, how far do we get? You know right well we don't go far. It is only by working in proper cooperation with those that are around us that we will get anywhere. No one has a monopoly on the best ideas and there is no finality in cost accounting. There is always room for improvement and the fact that we come to these meetings indicates the search being made for better methods.

Navigators, we know, use a chart. Without that chart, and all the navigating paraphernalia they use, a ship would get all out of its course and not reach its destination. Nevertheless the chart sometimes is *inadequate* though not necessarily *inaccurate*. With what result? Some hidden rock is not marked on the chart and the ship hits it and goes down with great loss of life.

Now, gentlemen, how about our navigating charts in business? How about our cost systems? Are they adequate? Do they give us the figures, the results, the information that is needed? Is there any one mill that is so self sufficient that they are entirely satisfied that they are getting the best results from their cost system?

This brings me to another point and that is often-times the wasted individual effort that is brought about through lack of cooperation.

Mr. Jordan referred yesterday to the necessity of cooperation between labor and management. Mr. Bearce has referred today to the necessity of cooperation between the accountants and the engineers. Why? In order that our charts, our cost accounting systems may be adequate and give us the needed information. Now suppose you have in a mill, in one organization, all kinds of cooperation between your men, the engineers, accountants and the management, and you have a yardstick against which you measure your results. Are you satisfied with that?

The point I am coming to is this that although you may be satisfied with present standards a comparison of them with those of some other organization may show that the results which you

*Address and discussion following address and discussion on the same subject by G. D. Bearce, at the convention of the Cost Association of the Paper Industry, Commodore Hotel, New York, December 12, 1924, printed in last week's issue of the Cost Section.

thought were satisfactory are not good enough. Maybe over some period of time you have been getting sixty per cent efficiency in your steam plant when you should have been getting a much higher percentage. Your past records will not tell you this unless you get comparative figures from some other organization or mill.

By way of illustration, I will refer shortly to the methods that the newsprint mills have used. They compare costs as you have been told. They found this to be a very definite incentive to get better results. They are not content with going along by themselves regardless of how large they may be individually. Their cost system may be entirely adequate but they want to know how they compare with the results attained by a management in another organization, with different brains, managerial force, and policies. Comparative costs produce curiosity. One man wants to know how the other fellow gets away with a better showing. It also produces an interest in better cost methods. The figures must be prepared correctly on the same basis to obtain the desired results.

The interest is further increased by ranking the companies by listing the lowest conversion cost mill at the top with the highest cost at the bottom—and when a company finds it ranks fifth or seventh in that list when it thought it was first, a manager thinks, "By golly, I thought we were at the top of the list. I thought we had the lowest cost mill. The other fellow is putting it over on us. Why is it?" And in that way you get this competitive interest brought about.

If costs are to be compared, there must be the personal contact between the agency which compiles the comparative statements, and the mills. Without that personal contact the different problems can not be solved properly. This has resulted in definite savings by the mills.

Underlying all this in cost accounting is the necessity for cooperation, the necessity for cooperative effort. You are a cooperative association. Your association gets together periodically to discuss their problems in the paper industry. We believe one of the best methods of producing cooperative effort is through the comparison of costs. How you will meet that problem, it is not up to me to say, but I do know how the newsprint people have been going at it and I would impress upon you this morning the need for cooperative effort and by that I don't mean only in you own individual mills. You may be getting fine cooperation there, but gentlemen it has to be broadened out between mills and finally into a whole industry. There is no thought in this work on controlling or fixing prices or anything of that sort. The costs are used as an aid in managerial control of the mills.

Cooperative effort must be extended not only in individual mills but in the whole industry. (Applause).

CHAIRMAN MCNAUGHTON: There must be a number of gentlemen present who could speak very feelingly and intelligently on these subjects that have been under discussion. The figures for furnish against production, the recovery of the cost of making steam and the difficulties that you have in tabulating or coordinating your costs are all interesting. I don't want to call on any one at the start but I will be glad to have discussion, good active discussion.

MR. BURKE: May I suggest that the gentlemen here might tell us what they are doing about white water. I was in one mill where they claimed all of the white water was pumped back to a tank of some kind. I have talked about it since with Mr. Bearce and he said it was quite possible. What I would like to know is how many mills are making any effort to reclaim the white water and what they are doing with it.

MR. KOENIG: I think I can throw some light on that. I think we are one of the few who are doing it. We have in one of our mills mechanical savealls of good type which I think are known to all of you, for the filtering of our white water in order to reuse the biggest quantity of this on our paper machines for showers. At the same time, the surplus water which cannot be used for showers or beaders is taken over to the sulphite mill for screening purposes. There is a small quantity of water which will go out into the river on which outlet there will be some kind of a saveall, probably a sedimentation tank. This is just a short outline of one of the systems we have installed and which we know brings quite a success.

One item has to be considered and that is, you cannot use all reclaimed stock. You have to have some kind of an average grade into which you run the savings from this canal.

CHAIRMAN MCNAUGHTON: What is the amount of material that you are trying to account for, the difference between the stock used and the paper made?

MR. KOENIG: In one of our mills it is down between four and five per cent.

CHAIRMAN MCNAUGHTON: Does any one want to talk on the difficulties that they have experienced in determining the quantity of pulp or raw material used?

In the handling of material even when it is in fairly dry form, most mills have difficulty in knowing how much pulp to use. It may be due to the inventory arrangement, keeping the material in a form that can be estimated or determined at any stated period. In the case of pulp, if it is in slush form, it is an impossibility I say, although it has been in contemplation, to meter the slush material and determine the pulp content. Even that, however, I think would at best be an estimation. But in the case of material like rags, wastepaper and dry pulp, the difficulty generally speaking, arises from more or less careless methods in keeping the stock in the warehouse.

QUESTION: I would like to find out from Mr. Ware how far the newsprint people go in comparing the costs. Just how do they compare the costs? What comparative figures have they?

MR. WARE: We compare conversion costs only. We don't attempt to compare the total costs. We compare the conversion costs of ground wood, sulphite and newsprint and the cost of steam You have an example of the latter statement in the sheet before you. We don't show any wood cost in pulp and we don't show any cost in paper. It is just the conversion costs for which the men in the mills are responsible. These figures are gathered on small cards sent into us and each company is listed on the comparative sheets under an index number. These statements are then returned to the different companies who have reported their figures together with the index list which is simply a sheet of paper showing the names of the companies and their index numbers. The names of the companies are not shown on the comparative statements themselves.

QUESTION: Do you make any effort at knowing how a mill compares in capacity or location so he can make an intelligent comparison?

MR. BEARCE: Each mill knows the other. This index list isn't to conceal the mill. They all have an index and they know who each one is.

QUESTION: You make no effort to conceal the identity then? The Cost Association of the Paper Industry conceals the identity on all those questionnaires, don't they? Therefore a mill like ours has no method of comparing how they stand with other mills. The questionnaire was valueless to us. We didn't know which mill we could compare with. I just wondered why you didn't give the names of the mills.

CHAIRMAN MCNAUGHTON: Of course, the conversion costs of a mill making board would not be comparative with a mill making fine paper. It might happen that a mill making the largest quantity of steam per day had higher costs than the one making the lowest. They are both making steam; the same sort of operation is going on. They are using coal and water and making steam. When it comes to making paper, the Newsprint Service Bureau has of course a very fine opportunity for comparing large productions. The tonnage of newsprint paper is very large and the unit is large. In the Cost Association, it seems to me while the comparison of all groups of paper mills might be difficult to study and get bene-

ficial results from, yet on the other hand, it might be more beneficial than for a newsprint mill with proper analysis and proper study of the figures. As to the identity of the mills, I suppose it is a matter for your Association to determine the method of making the comparison. There is no question at all but what the comparison of cost figures and efficiency figures, as Ware has pointed out, have eminent value and the real value will depend upon how carefully the figures are massed and the extent to which the members want their mill known.

MR. WARE: In connection with that, not only do these mills know the indentjties of one another but you raise a point of being able intelligently to compare the figures. Each company needs to know the conditions under which the others are working, the kind of equipment they have, what the normal labor allowance, etc. They need to know how they get at fixed charges and items of that character. We have amassed a whole lot of information shown in what is termed an "analytical statement" grouped by companies. The section for each company starts with a chart showing the general layout of the accounts by processes followed by a list of normal labor allowance in each operation, the method of determining the quantity and cost of conversion materials used, the method of distributing fixed charges and a general list of the equipment.

In connection with the steam plant, information has been furnished on the layout of the boiler house and the hooking up of the pipe lines, etc. All of this information is used to intelligently study the results shown by either the comparative efficiency or cost figures.

SECRETARY BURKE: I might say the Newsprint Service Bureau has thirty members and they have an efficient organization, so they are equipped to do a great deal. It is impossible for us to go into this subject the same way they are doing. We can do a great deal though. There is a great deal of work to be done in clearing the ground before we get to that stage. As Mr. Ware said, they had an incentive for starting the work. They were sensible enough when the investigation was over to form this Bureau and get going. They have carried on since then very effectively indeed.

I don't want this to end the session but while I am on my feet, I want to express my appreciation to Mr. Ware, Mr. Bearce and also Mr. McNaughton for their kindness in coming here this morning. The Newsprint Service Bureau is not affiliated with us in any way simply to show their interest in this work and to help this Association out, they have come to tell us what can be done along these lines. It is up to the Cost men in the industry to help the Association in selling this to the executives with a view to getting a larger membership. We can gradually progress and get to their status through the different groups in the industry. It is a long hard job and we are making progress but we can do a great deal in comparing costs without going into so much detail. It is my opinion these steam losses and white water losses do represent probably the two biggest items in which large savings can be effected by the paper mills. We thought it best to draw attention to those items in which the largest savings can be effected and to tackle those first and then come on down the line.

CHAIRMAN MCNAUGHTON: In connection with white water losses, I want to say I think it was two weeks ago in the TECHNICAL SECTION of the PAPER TRADE JOURNAL, there was a report of the discussion at Buffalo on white water losses. Contained in that section is an outline of a saveall performance code which was prepared to get the essential information for comparative purposes between mills. It requires measuring equipment. This was worked up by the Waste Committee of the Technical Association with Doctor Wells of the Forest Products Laboratory. Dr. Wells is arranging to get some figures on the white water losses and saveall performance in a number of mills, chiefly for the purpose of establishing standards. They have written to thirty or forty mills, six or eight in different groups of paper making—board, book, tissue, wrapping and news—and they are going to get a few mills to furnish the information to the laboratory for that purpose. It would fall right in line with what Mr. Burke has said, if your Association wanted to do so, to adopt that code for your Association and collect those figures for the benefit of your members. The code has been well worked out, not too elaborate but sufficiently to give leading information, down to the lowest per day figure in per cent of daily production through the white water that could be easily tied in with the cost figures.

I understand of course the Cost Association needs dollars and cents to do any work so that it would be an easy matter for you to tack on to the pounds of pulp in the white water, a figure of dollars and cents and consequently come into Cost Association work which Mr. Burke and I sometimes talk about. I always tell Mr. Burke the Technical Association is interested primarily in quantities of material, in hours of man labor and in tons of paper, tons of pulp, cords of wood, and I am quite content for Mr. Burke to deal with the dollars and cents' end of it.

By intelligent cooperation the dollars and cents and quantities of material can be tied together.

Are there any other points of discussion?

SECRETARY BURKE: That brings out a suggestion that I would like to make. Mr. McNaughton, about the material which your Association gets out. There are about one hundred members in this Association and I think it would be a mighty fine thing if I could make some arrangement with your Association whereby perhaps not all the technical papers but some of those papers could be distributed. I don't want to do you out of any memberships though. I will suggest that their technical men join your Association.

CHAIRMAN MCNAUGHTON: It is a matter for personal interest. As you say, in a great majority of the mills represented here, there are Technical Association members and the great bulk of the material which the Technical Association issues appears in the TECHNICAL ASSOCIATION SECTION of the PAPER TRADE JOURNAL. It is true you have a Cost Association Section too. The difficulty of course is that your cost man is inclined to read the Cost Section and to pass up the Technical Section. On the other hand, the Technical men are inclined to read the Technical Section and pass up the Cost Section. A very good way would be for Mr. Burke as he notes an item or a paper in the Technical Section to circularize his members and point out that there is an article which you should read. The difficulty is to stimulate personal interest. In the Technical Association Section, we publish every week an abstract of current literature. In that is covered the Cost literature as well as the Manufacturing literature so that if you haven't been following the current literature abstracts, it is well worth your while to do so. But in the final analysis, from my mill experience and contact with the cost accountant at the mills, the difficulty with all of us is that we get in a certain rut with a wall on each side of us and we walk down our road with our cost accountant on the other side of the wall, parelleling our path and we ignore each other's work pretty materially. It is only when necessity calls upon us to work together as well as the influence of development of the industry that we do cooperate.

As good an example as any that I have seen is the meetings of the News Print Service Bureau. I do not think there are any meetings of the Newsprint Service Bureau's operating staff where the cost accounts and the engineers do not meet together. There they discuss the matters that have to do with operations jointly, consequently without being able to avoid it, they must learn the problems on the one side of getting quantities, material and efficiency of operation. On the other side, the record of those efficiencies and cost of operation. The more that the cost of making a product and the way it is made can be brought together, the better it is going to be collaborated. That is one reason why I would say again that it would be well worth your while of an evening, instead of reading the American Magazine and the Saturday Evening Post, if you would put an hour or two or even fifteen minutes a day on reading those two volumes—Volume 3 on the Manufacture of Wood Pulp and Volume 4 on Treatment of Rags, Waste Paper, etc.—and

Volume 5 will be out the first of the year describing the making of paper. By studying them and reading them you will have a good deal of information which would apply directly to your own plant and draw conclusions which would be of great value to you.

Any other discussion?

SECRETARY BURKE: I think the hour is late and the time for adjournment has come.

QUESTION: I think it would be in order for us to have a rising vote of thanks to the speakers. I haven't heard it all but I have heard enough to realize that it has been interesting. I know you all appreciate what the speakers have said. I would have that vote include our chairman and the other speakers who have constributed to this meeting this morning.

The members arose and applauded.

"Regrow Our Vanishing Forests"

BOGALUSA, La., March 2, 1925.

Editor PAPER TRADE JOURNAL:

I would like to call your particular attention to an editorial on "Regrow Our Vanishing Forests," in *Liberty*, issue of February 21.

This is a wonderfully well written editorial, and covers the situation fully. It is going to be of incalculable benefit in the rapidly growing sentiment in favor of reforestation.

Yours truly,

W. H. SULLIVAN,
Vice-President and General Manager
Great Southern Lumber Company.

The editorial referred to in the foregoing letter follows:—

"In the days when Theodore Roosevelt was inspiring the thought of American people, the nation began to realize that it was expending some of its basic resources at a ruinous rate. Conspicuous among these resources were our forests and woodlands. Pioneer people on a continent like ours take the forest almost as an enemy. To them it is something to be overcome. It hides their savage foes. It occupies land which the plow would make productive. And, save for the prairies, America was so well wooded that, even when later generations had left behind this feeling of the pioneer with his passion for clearing, they took the forests for granted, while private enterprise exploited them without thought of the future.

"Roosevelt and his group of conservationists awakened the nation to the danger of deforestation. We were told what would happen if the great watersheds were denuded and our timber reserves wiped out. In consequence the Federal government took over forest lands for preservation, many of the States followed, and the problem of reforestation became a conscious concern of the nation's policy.

"But the problem has not been solved. Far from it. Our trees are destroyed four times faster than we are producing them. Twenty years at the present rate of loss will leave us without timber. 'The timber famine,' says the chief of the Federal Bureau of Forestry, Colonel Greeley, 'is no longer a distant and theoretical danger; it is here.'

"The country's need is so great and the problem has so many sides that all possible agencies are required to deal with it, both public and private. The Federal government must help. The States must help. Private individuals and associations must help. especially private industry.

"The government, national and state, must help because the vast forests on the mountain ranges and watersheds are necessary to protect the climatic conditions which make the country fertile. This is a duty which cannot be left entirely to private enterprise, which has to consider profits and could not afford perhaps to give them as efficient protection as a public agency from fire hazards and other losses where the forests are remote and not very profitable, though important climatically.

"Yet we must rely largely upon private interest and enterprise for regrowing our vanished or vanishing forests. We must make it worth while to grow trees on lands not suited for crops but capable of bearing trees. By wise tax exemptions and other aid where necessary the raising of timber may be made profitable to the farmer and other land holders. A good form of long time investment for insurance companies, savings banks, and trustees could be created in timber holdings, properly safeguarded.

"But before ways and means are fixed, a general policy should be laid down assigning to the various agencies relied upon—the Federal government, the States, the lumber and paper industries, farmers and land owners—their respective spheres of action. After this is done the methods of forestation, reforestation, and commercial problems, the problems of production, marketing, and conservation may be taken up, and the financing, economics, and arboriculture, fire and disease protection, etc., can be worked out without confusion within the frame of a comprehensive policy.

"This is a basic problem of the nation, which we cannot afford to neglect, but which solved, as it can be solved, will bring a rich reward to all our people for all time."

Providence to Have Chemical Show

A technical-industrial gathering of 1,000 persons, representing single plants and entire industries, the annual productive capacities of which run into billions of dollars, is assured in connection with the Chemical Equipment Exposition, to be held in Providence June 22-27, inclusive, 1925.

This announcement is made by the Association of Chemical Equipment Manufacturers, the trade association of large equipment companies which is managing the Exposition.

The Exposition is designed solely for the benefit of industrial and technical men in the chemical and chemically-dependent industries. It will serve to introduce to manufacturers in many industries, not customarily thought of as "chemical," modern engineering processes and equipment for performing profitable single or multiple chemical phases of production.

The chemically-controlled industries are: heavy chemicals, fine chemicals, coal products, dye, fertilizer, explosives, alcohol, eleotrochemical, electrometallurgy, ferrous-metallurgy, non-ferrous-metallurgy, ceramics, petroleum, paper and pulp, rubber, paint and varnish, leather, lime and cement, soap, oil, sugar, food products, wood products, animal products.

Each one of these industries is dependent upon chemical engineering, chemical processes and chemical equipment, accessories, supplies and essential materials in some one or more of its phases.

The Exposition will be held in the State Armory. The general headquarters of the Association are 1328 Broadway, New York City. The Providence-Biltmore, Narragansett, Dreyfus and Crown Hotels in Providence are now accepting reservations for the period of the Exposition.

Baldwin Mills Sample Book

The Baldwin Paper Mills, Inc. of 261 Broadway, are sending out copies of a publishers' mill sample book and price list for publishers and large users of paper. The book has been designed with a view to enabling publishers to carry on more advertising campaigns without increasing their appropriation.

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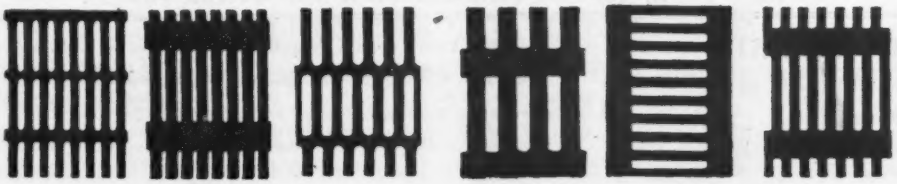

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NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING FEBRUARY 28, 1925

SUMMARY

News print.....808 rolls, 144 bls.
Printing paper.....338 cs., 175 rolls, 61 bls.
Wall paper.....22 cs., 112 bls.
Wrapping paper..285 rolls, 79 cs., 79 bdls., 418 bls.
Drawing paper.....6 cs.
Cigarette paper.....26 cs.
Writing paper.....18 cs.
Paper hangings.....923 bls., 6 cs.
Filter paper.....87 cs., 59 bls.
Colored paper.....5 cs.
Decalcomania paper.....2 cs.
Metal coated paper.....8 cs.
Baryta coated paper.....10 cs.
Litho paper.....30 cs.
Packing paper.....50 bls.
Letter paper.....1 cs.
Note paper and envelopes.....4 cs.
Surface-coated paper.....126 cs.
Strawboard.....316 rolls
Fancy paper.....22 cs.
Carbon paper.....11 cs.
Tracing paper.....6 cs.
Kraft paper.....253 rolls, 82 bls.
Miscellaneous paper,
101 cs., 193 bls., 3,869 rolls, 3 crates

CIGARETTE PAPER

P. J. Schweitzer, France, Havre, 25 cs.
Standard Products Corp., by same, 1 cs

WALL PAPER

Whiting & Patterson Company, Berengaria, Havre, 12 cs.
R. F Downing & Co, Tak. Maru, Kobe, 45 bls.
F. J. Emmerich & Co., Minnetonka, London, 14 bls., 3 cs.
F. J. Emmerich & Co., Cedric, Liverpool, 33 bls.
F. J. Emmerich & Co., Cleveland, Hamburg, 20 bls.
A. C. Dodman, Jr., Inc., Montana, Antwerp, 7 cs.

PAPER HANGINGS

A. C. Dodman, Jr., Inc., Carmania, Liverpool, 31 bls.
W. H. S. Lloyd & Co., Minnetonka, London, 47 bls., 6 cs.
J. W. Hampton, Jr., & Co., Montana, Antwerp, 471 bls.
The Prager Company, by same, 374 bls.

NEWS PRINT

M. Gottesman & Co., Inc., Drottningholm, Gothenburg, 207 rolls.
Bank of New York, by same, 142 rolls.
Irving Bank Columbia Trust Co., Cleveland, Hamburg, 182 rolls.
Chemical National Bank, by same, 33 rolls.
Keferstein & Gemonat, by same, 20 rolls.
W. Hartman & Co., by same, 141 rolls, 115 bls.
Maurice O'Meara Company, by same, 29 bls.
M. Gottesman & Co., Inc., by same, 83 rolls.

PRINTING PAPER

P. C. Zuhlke, Zeeland, Antwerp, 41 cs.
P. Puttman, by same, 199 cs.
Ferry, Ryer & Co., Cameronia, Glasgow, 30 cs.
B. F. Drakenfeld & Co., Cedric, Liverpool, 20 cs.
Majestic Mills Paper Company, Westerdyk, Rotterdam, 61 bls.
P. C. Zuhlke, Montana, Antwerp, 48 cs.
J. H. Scott Paper Company, Cleveland, Hamburg, 175 rolls.

LITHO PAPER

B. C. Ritchie & Co., Pr. Harrison, Canton, 30 cs.

COLORED PAPER

C. W. Williams, Zeeland, Antwerp, 5 cs.

WRAPPING PAPER

H Reeve Angel & Co., Inc., Zeeland, Antwerp, 6 rolls.
F. L. Kramer & Co., by same, 7 cs.
Blauvelt-Wiley Paper Manufacturing Company, by same, 79 bdls.
Perkins Goodwin & Co., Taibu Maru, Hamburg, 1 bale.
Republic Bag & Paper Company, by same, 143 bls.
Drinhausen Hollkott Paper Company, Westerdyk, Rotterdam, 48 rolls.
C. K. MacAlpine Company, Drottningholm, Gothenburg, 23 bls., 65 cs.
F. L. Kramer & Co., Montana, Antwerp, 7 cs.
T. Barrett & Son, Cleveland, Hamburg, 103 rolls.
Maurice O'Meara Company, by same, 130 bls.
Wilkinson Bros. & Co., Inc., Tyrifjord, Trondhjem, 128 rolls, 121 bls.

PACKING PAPER

Maurice O'Meara Company, Eglantone, Rotterdam, 50 bls.

WRITING PAPER

Marcus Ward, Inc., Cameronia, Glasgow, 7 cs.
G. W. Sheldon & Co., Minnetonka, London, 1 cs.
Distinctive Writing Paper, France, Havre, 1 cs.
Guibout Freres, Berengaria, Havre, 9 cs.

LETTER PAPER

J. Kenneddy, Roussillon, Bordeaux, 1 cs.

NOTE PAPER AND ENVELOPES

A. Goodman & Co., Carmania, Liverpool, 4 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Zeeland, Antwerp, 39 cs.
Gevaert Company of America, by same, 9 cs.
Gevaert Company of America, Montana, Antwerp, 57 cs.
F. C. Zuhlke, by same, 21 cs.

BARYTA COATED PAPER

T. F. Wilmot & Co., Minnetonka, London, 10 cs.

METAL COATED PAPER

Hensel, Bruckman & Lorbacher, France, Havre, 1 cs.
Hensel, Bruckman & Lorbacher, Cleveland, Hamburg, 7 cs.

STRAWBOARD

A. Vuyck, Westerdyk, Rotterdam, 316 rolls.

DRAWING PAPER

Favor, Ruhl & Co., Minnetonka, London, 4 cs.
H. Reeve Angel & Co., Inc., by same, 2 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 14 cs.
A. Giese & Son, Roussillon, Bordeaux, 59 bls.
Franco American Import Corp., by same, 73 cs.

FANCY PAPER

Whiting & Patterson Company, Berengaria, Southampton, 22 cs.

CARBON PAPER

Steiner Paper Company, Westerdyk, Rotterdam, 11 cs.

TRACING PAPER

E. Dietzgen, Westerdyk, Rotterdam, 6 cs.

KRAFT PAPER

Arkell Safety Bag Company, Dottningholm, Gothenburg, 253 rolls, 57 bls.
T. Barrett & Son, by same, 25 bls.

DECALCOMANIA PAPER

Phoenix Shipping Company, Cleveland, Hamburg, 2 cs.

PAPER

Gallagher & Ascher, Minnetonka, London, 5 cs.
J. I. Bernitz, Eglantine, Rotterdam, 20 cs.
H. Fishman Paper Company, Drottningholm, Gothenburg, 42 bls, 1,084 rolls.
The Borregaard Company, Inc., by same, 209 rolls.
C. G. Winans Company, by same, 547 rolls.
M. M. Cohen, by same, 253 rolls, 25 bls.
C. K. MacAlpine Company, by same, 1,402 rolls, 28 bls.
Mugler & Umlauf, by same, 97 bls., 9 rolls.
E. H Sergeant & Co., by same, 3 cs.
C. G. Keferstein, by same, 365 rolls.
A. L. Diament, France, Havre, 14 cs.
F. C. Strype, Berengaria, Bordeaux, 3 crates.
Redaktor Andreas Rygg, Tyrifjord, Stavanger, 1 bl.
Japan Paper Company, C. Verde, Genoa, 59 cs.

RAGS, BAGGING, ETC.

E. J. Keller Company, Inc., Swazi, Marseilles, 257 bls. rags.
S. Shapiro & Sons, by same, 46 bls. rags.
L. H. Abenheimer, by same, 154 bls. rags.
Albion Trading Company, by same, 46 bls. rags.
A. W. Fenton, Inc., by same, 132 bls. rags.
S. Silberman, by same, 31 bls. rags.
R. Blank, by same, 117 bls. rags.
Castle & Overton, Inc., Pr. Harding, Bremen, 41 bls. rags.
E. J. Keller Company, Inc., Arabic, Hamburg, 70 bls. rags.
E. J. Keller Company, Inc., Alberta, Trieste, 37 bls. rags.
E. J Keller Company, Blair, Marseilles, 190 bls. rags.
E. J. Keller Company, Inc., Britannia, Barcelona, 58 bls. rags.
E. J. Keller Company, Inc., London Commerce, London, 140 bls. rags.
E. J. Keller Company, Inc., Mt. Clay, Hamburg, 36 bls. rags.
Katzenstein & Keene, Inc., Blair, Italy, 116 bls. rags.
Katzenstein & Keene, Inc., Cameronia, Glasgow, 27 bls. new rags.
Brown Bros. & Co., by same, 93 bls. rags.
Salomon Bros. & Co., Fenchurch, Marseilles, 125 bls. rags.
Salomon Bros. & Co., Marengo, Newcastle, 62 bls. rags.
Salomon Bros. & Co., Westphalia, Hamburg, 97 bls. rags.
Salomon Bros. & Co., Sangamon, Marseilles, 72 bls. rags.
Maurice O'Meara Company, Denham, Leghorn, 18 bls. rags.
V. Galaup, Inc., by same, 28 bls. rags.
Manufacturers' Trust Company, by same, 90 bls. rags.
International Acceptance Bank, by same, 239 bls. rags.
Equitable Trust Company, by same, 142 bls. rags.
J. B. Moors & Co., Caucasier, Antwerp, 222 bls. rags.
Brown Bros. & Co., by same, 364 bls. rags.
E. J. Keller Company, Inc., by same, 286 bls. rags.
Goldman, Sachs & Co., by same, 100 bls. rags.
Kidder Peabody Acc. Corp., Georgia, Trieste, 44 bls. rags.
National City Bank, by same, 131 bls. rags.
Bankers' Trust Company, by same, 77 bls. rags.
Salomon Bros. & Co., A. Ballin, Hamburg, 91 bls. jute waste.
Salomon Bros. & Co., Cilla Ada, Genoa, 63 bls. threads.
Salomon Bros. & Co., Castilian Prince, Rio, 35 bls. rags.
Salomon Bros. & Co., Thuringia, Hamburg, 58 bls. jute waste.
Salomon Bros. & Co., Deutschland, Hamburg, 65 bls. jute waste.
Castle & Overton, Inc., United States, Copenhagen, 411 bls. rags.
National City Bank, by same, 133 bls. rags.
National City Bank, Cleveland, Hamburg, 196 bls. rags.
L. H. Abenheimer, by same, 58 bls. rags.
Union National Bank, by same, 106 bls. rags.
Brown Bros. & Co., by same, 192 bls. rags.
W. Schall & Co., by same, 17 bls. rags.
Equitable Trust Company, by same, 16 bls. rags.
E. J. Keller Company, Inc., by same, 42 bls. rags, 99 bls. bagging.
E. J. Keller Company, Inc., Hektor, Barcelona, 61 bls. rags.
E. J. Keller Company, Inc., Rousillon, Bordeaux, 141 bls. rags.
Anglo South American Trust Company, by same, 127 bls. rags.
Katzenstein & Keene, Inc., Mississippi, London, 14 bls. rags.
G. M. Graves Company, Pacific Maru, Genoa, 28 bls. rags.
A. W. Fenton, Inc., by same, 85 bls. rags.
The Stone Bros. Company, by same, 9 bls. rags.
National City Bank, by same, 140 bls. rags.
V. Galaup, Inc., Cedric, Liverpool, 12 bls. rags.
W. Barnett, by same, 45 bls. rags.
Royal Manufacturing Company, by same, 84 bls. cotton waste.
H. S. Prince, by same, 73 bls. bagging.

(*Continued on page 76*)

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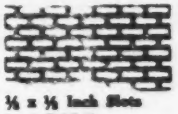

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Imports of Paper and Paper Stock

(*Continued from page 74*)

Castle & Overton, Inc., Taibu Maru, Hamburg, 3 bls. rags.
National City Bank, by same, 67 bls. rags.
State Bank, by same, 67 bls. rags.
Paterson National Bank, by same, 16 bls. rags.
Garfield National Bank, by same, 56 bls. rags.
Union National Bank, by same, 154 bls. rags.
Manufacturers' Trust Company, by same, 350 bls. rags.
Guaranty Trust Company, by same, 48 bls. rags.
E. J. Keller Company, Inc., by same, 63 bls. rags.
Katzenstein & Keene, Inc., Eglantine, Rotterdam, 157 bls. rags.
A. W. Fenton, Inc., by same, 259 bls. rags.
Garfield National Bank, by same, 44 bls. rags.
State Bank, by same, 117 bls. rags.
National City Bank, by same, 206 bls. rags.
E. J. Keller Company, Inc., by same, 14 bls. rags.
Reis & Co., by same, 57 bls. thread waste.
D. M. Hicks, Inc., by same, 55 bls. bagging.
The Stone Bros. Company, Westerdyk, Rotterdam, 21 bls. rags.
W. Steck & Co., by same, 80 bls. bagging.
American Exchange National Bank, by same, 23 bls. rags.
National Bank of Commerce, by same, 20 bls. rags.
E. J. Keller Company, Inc., by same, 55 bls. new rags.
E. J. Keller Company, Inc., Westerdyk, Amsterdam, 106 bls. rags.
S. Birkenstein Sons, Westerdyk, Rotterdam, 118 bls. rags.
Leshner Paperstock Company, by same, 26 bls. rags.
Atlas Waste Manufacturing Company, by same, 46 bls. rags.
J. J. Patricof, by same, 193 bls. rags.
National City Bank, by same, 55 bls. rags.
Castle & Overton, Inc., Ala, Rotterdam, 44 bls. bagging.
Castle & Overton, Inc., Hektor, Barcelona, 113 bls. bagging.
Castle & Overton, Daytonian, England, 25 bls. bagging.
Castle & Overton, Inc., Doric, Liverpool, 114 bls bagging.
Castle & Overton, Inc., Sonora, France, 7 bls. jute waste.
Castle & Overton, Inc, Anaconda, Rotterdam, 210 bls. rags.
S. Birkenstein Sons, by same, 390 bls. rags.
American Woolstock Corp., by same, 62 bls. rags.
E. J. Keller Company, Inc., by same, 58 bls. rags, 149 bls. bagging.
Reis & Co., by same, 78 bls. thread waste, 20 bls. old carpets.
Katzenstein & Keene, Inc., Galileo, Hull, 120 bls. rags.
Brown Bros. & Co., Galileo, Newcastle, 92 bls. rags.
Mechanics' & Metals' National Bank, by same, 80 bls. rags.
Union National Bank, by same, 302 bls. rags.
Amsinck, Sonne & Co., Inc., Fluor Spar, Leith, 206 bls. paper stock.

OLD ROPE

Brown Bros. & Co., Zeeland, Antwerp, 93 coils.
E. J. Keller Co., Inc., Westerdyk, Rotterdam, 38 coils.
E. J. Keller Company, Algic, Marseilles, 109 bls.
Castle & Overton, Inc., United States, Copenhagen, 51 coils.
Brown Brothers & Co., Cleveland, Hamburg, 48 coils.
Brown Bros. & Co., Galileo, Hull, 191 bls.
Brown Bros. & Co., Galileo, Newcastle, 446 coils.
Whaling Waste Products Company, Anaconda, Rotterdam, 41 coils.

MANILA ROPE

Disbrow Cordage Company, Pr. Harrison, Manila, 416 coils.
Ellermans' Wilson Line, Minnetonka, London, 87 coils.
N. Y. Cordage Company, Zeeland, Antwerp, 83 coils.

MANILA ROPE YARN

Manufacturers' Trust Company, Pr. Harrison, Manila, 592 pkgs.

SISAL ROPE

N. Y. Cordage Company, Zeeland, Antwerp, 92 coils.

SUNN ROPE

N. Y. Cordage Company, Zeeland, Antwerp, 14 coils.
De Grauw Aymar Company, by same, 20 coils.

WOOD PULP

M. Gottesman & Co., Inc., Taibu Maru, Hamburg, 700 bls., 106 tons sulphite pulp.
E. J. Keller Company, Inc., by same, 700 bls., 106 tons sulphite pulp.
International Acceptance Bank, Anaconda, Rotterdam, 817 bls., 176 tons wood pulp.
International Acceptance Bank, Eglantine, Rotterdam, 958 bls., 207 tons wood pulp.
F. M. Sergeant Company, Drottningholm, Gothenburg, 1,802 bls. sulphite pulp, 980 bls. dry soda pulp.
Price & Pierce, Ltd., by same, 1,600 rolls wet pulp.
Nilsen, Lyon & Co., Inc., United States, Oslo, 2,509 bls. mechanical pulp.
E. M. Sergeant Company, by same, 325 bls. dry pulp.
American Exchange National Bank, by same, 160 bls. wood pulp.
Buck, Kaier & Co., United States, Copenhagen, 800 bls. wood pulp.
Johaneson, Wales & Sparre, Inc., by same, 500 bls. wood pulp.
Castle & Overton, Inc., Cleveland, Hamburg, 900 bls., 180 tons wood pulp.
J. Andersen & Co., Tyrifjord, Sarpsborg, 1,860 bls. sulphite pulp.
M. Gottesman & Co., Inc., Belfast Maru, Hamburg, 400 bls. wood pulp.
Johaneson, Wales & Sparre, Inc., United States, Copenhagen, 500 bls. sulphite pulp.

WOOD PULP BOARDS

Fibre Case & Novelty Company, Drottningholm, Gothenburg, 34 bls.

WOOD FLOUR

B. L. Soberski, Tyrifjord, Frederickstad, 1,500 bags, 102,000 kilos.
A. Kramer & Co., Tyrifjord, Flekkefjord, 700 bags, 35,500 kilos.
Bakelite Corp., Anaconda, Rotterdam, 1,023 bags, 50,390 kilos.

CASEIN

West Virginia Pulp & Paper Company, Cubano, Buenos Aires, 417 bags, 25,020 kilos.
T. M. Duche & Sons, by same, 2,919 bags, 175,140 kilos.
Atterbury Bros., Inc., Vandyck, Buenos Aires, 417 bags, 25,020 kilos.
Atterbury Bros., Inc., Rousillon, Bordeaux, 234 bags.
American Machine & Foundry Company, by same, 267 bags.
Aladdin Chemical Products Company, United States, Copenhagen, 3 bags.

BALTIMORE IMPORTS

WEEK ENDING FEBRUARY 28, 1925

M. Gottesman & Co., Inc., Tampa, Gothenburg, 177 rolls printing paper.
E. J. Keller Company, Inc., Blommersdyk, Rotterdam, 260 bls. rags.
E. J. Keller Company, Inc., Blommersdyk, Amsterdam, 145 bls. rags.
E. J. Keller Company, Inc., Gotha, Bremen, 207 bls. rags.
E. J. Keller Company, Inc., Mt. Clinton, Hamburg, 194 bls. rag pulp.
Castle & Overton, Inc., by same, 2,005 bls. wood pulp.
Castle & Overton, Inc., West Harcuvar, Hamburg, 350 bls. wood pulp.
Castle & Overton, Inc., Westerner, Rotterdam, 768 bls. wood pulp.
Castle & Overton, Inc., Germany, 1,100 bls. wood pulp.
E. J. Keller Company, Inc., Taibu Maru, Hamburg, 900 bls., 135 tons wood pulp.
Goldman, Sachs & Co., by same, 766 bls., 116 tons sulphite pulp.
National City Bank, by same, 3,095 bls., 450 tons chemical pulp.
Perkins, Goodwin & Co., Tampa, Oslo, 1,794 bls. wood pulp.
Irving Bank Columbia Trust Company, by same, 150 bls. wood pulp.
E. M. Sergeant Company, Tampa, Gothenburg, 767 bls. wood pulp.
Parsons & Whittemore, Inc., by same, 600 bls. wood pulp.
Scandinavian Pulp Agency, Inc., by same, 2,058 bls. wood pulp.
Perkins, Goodwin & Co., Taurus, Stavanger, 1,800 bls. chemical pulp.
Irving Bank Columbia Trust Company, by same, 300 bls. sulphite pulp.
J. Andersen & Co., by same, 300 bls. sulphite pulp.
Merchants' National Bank, Tyrifjord, Greaker, 750 bls. sulphite pulp.
M. Gottesman & Co., Inc., Reserv, Stockholm, 10,000 bls. wood pulp.
M. Gottesman & Co., Inc., S. Morena, Stockholm, 1,500 bls. wood pulp.
M. Gottesman & Co., Inc., Hornfells, Stockholm, 1,500 bls. wood pulp.
M. Gottesman & Co., Inc., Oswal, Stockholm, 1,080 bls. wood pulp.
M. Gottesman & Co., Inc., Thyra, Stockholm, 4,572 bls. wood pulp.
M. Gottesman & Co., Inc., Yaye Maru, Trieste, 734 bls. wood pulp.
Johaneson, Wales & Co., Tampa, Gothenburg, 700 bls. sulphite pulp.

PHILADELPHIA IMPORTS

WEEK ENDING FEBRUARY 28, 1925

Brown Bros. & Co., Hannover, Bremen, 67 cs., 10 bls. wrapping paper.
A. Schoenhut & Co., Taibu Maru, Hamburg, 62 bls. cardboard.
Castle & Overton, Inc., by same, 92 bls. rags.
Union National Bank, by same, 258 bls. rags.
Baring Bros. & Co., Ltd., by same, 135 bls. rags.
Atlantic Exchange Bank & Trust Company, by same, 187 bls. rags.
National Bank of Commerce, by same, 51 bls. rags.
Equitable Trust Company, by same, 166 bls. rags.
Philadelphia National Bank, by same, 219 bls. rags.
Union City Bank, by same, 144 bls. rags.
Salomon Bros. & Co., McKeesport, Havre, 28 bls rags.
Salomon Bros. & Co., Waukegan, Havre, 3 bls. rags.
Brown Bros & Co., Eglantine, Rotterdam, 120 bls. rags.
Belgian Bank, by same, 205 bls. rags.
D. I. Murphy, by same, 87 bls. rags.
Union National Bank, by same, 85 bls. rags.
I. Reifsnyder Son & Co., Manch. Exchange, Manchester, 15 bls. thread waste.
Sinclair National Bank, by same, 79 bls. paper stock.
British Bank of South America, by same, 46 bls. paper stock.
Equitable Trust Company, by same, 185 bls. jute bagging, 30 bls. bagging.
J. H. Faunce, Inc., by same, 127 bls. bagging.
Baring Bros. & Co., Ltd., by same, 72 bls. bagging.
Katzenstein & Keene, Inc., by same, 57 bls. new cuttings.
F. Whitaker & Co., by same, 38 bls. rags.
State Bank, Dania, Copenhagen, 113 bls. rags.
State Bank, Seattle Maru, Hamburg, 277 bls. rags.
National Bank of Commerce, by same, 197 bls. rags.
Union National Bank, by same, 141 bls. rags.

(*Continued on page 78*)

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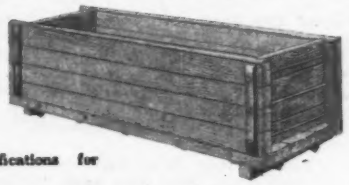

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PULP PAPER AND POWER PLANTS

ENGINEERS & CHEMISTS
INDUSTRIAL DESIGN
PLANT IMPROVEMENT
LABORATORY TESTS

Imports of Paper and Paper Stock

(*Continued from page 76*)

National City Bank, Seattle, Bremen, 412 bls. rags.
National City Bank, Hannover, Bremen, 95 bls. rags.
Brown Bros. & Co., by same, 301 bls. rags.
Belgian Bank, by same, 161 bls. rags.
E. J. Keller Company, Inc., by same, 132 bls. rags.
State Bank, by same, 86 bls. rags.
J. A. Steer & Co., Fluor Spar, Leith, 104 bls. rags.
Union National Bank, Anaconda, Rotterdam, 115 bls. paper stock.
R. Blank, by same, 183 bls. rags.
D. I. Murphy, by same, 396 bls. rags.
E. J. Keller Company, Inc, by same, 418 bls. rags.
E. J. Keller Company, Inc., Yaye Maru, Hamburg, 112 bls. rags.
E. J. Keller Company, Inc., Blair, Marseilles, 30 bls. rags.
E. J. Keller Company, Dania, Copenhagen, 326 bls. rags.
E. J. Keller Company, Inc., Dania, Aarhus, 147 bls. rags.
E. J. Keller Company, Inc., Dakotan, Kobe, 1,200 bls. rags.
E. J. Keller Company, Inc., Hektor, Barcelona, 22 bls. rags.
Castle & Overton, Inc., Beemsterdyk, Rotterdam, 40 bls. bagging, 98 bls. rags.
Castle & Overton, Inc., Blair, France, 132 bls. rags.
Castle & Overton, Inc., Arkansas, Copenhagen, 116 bls. rags.
Castle & Overton, Inc., Nevisian, Copenhagen, 365 bls. rags.
Castle & Overton, Inc., Mt. Clinton, Hamburg, 401 bls. rags.
Castle & Overton, Inc., Ala, Rotterdam, 13 bls. rags.
Castle & Overton, Inc., Hektor, Barcelona, 81 bls. rags.
Castle & Overton, Inc., Winifredian, London, 100 bls. rags.
Castle & Overton, Inc., Cabo Villano, Italy, 195 bls. rags.
Castle & Overton, Inc., Seattle Spirit, Hamburg, 412 bls rags.
Castle & Overton, Inc., Hannover, Bremen, 85 bls. rags.
Castle & Overton, Inc., Gilda, Italy, 278 bls. rags.
Castle & Overton, Inc., West Arrow, Antwerp, 65 bls. rags.
Brown Bros. & Co., Fluor Spar, Leith, 116 coils old rope.
J. B. Moors & Co., Nw. Miller, London, 40 bls. old rope.
Johaneson, Wales & Sparre, Inc., Taibu Maru, Hamburg, 4,270 bls., 619 tons sulphate pulp.
The Borregaard Company, Inc., Dania, Sarpsborg, 150 bls. sulphite pulp.
The Borregaard Company, Inc., Dania, Oslo, 300 bls. sulphite pulp.
Corn Exchange Bank, by same, 2,500 bls. sulphite pulp.
Castle & Overton, Inc., Germany, 520 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING FEBRUARY 28, 1925.

Castle & Overton, Inc., Bruxelles, France, 156 bls. waste paper, 239 bls. rags.
Castle & Overton, Inc., Carplaka, France, 38 bls. rags.
Castle & Overton, Inc., Maasdam, Rotterdam, 95 bls. rags.
Katzenstein & Keene, Inc., Duquesne, England, 39 bls. rags.
Castle & Overton, Inc., Yarra, Sweden, 800 bls. wood pulp.

CHARLESTON IMPORTS

WEEK ENDING FEBRUARY 28, 1925.

E. J. Keller Co., Inc., Minnequa, Antwerp, 99 bls. baging.
E. J. Keller Co., Inc., Sun Dance, Antwerp, 123 bls. bagging.

NORFOLK IMPORTS

WEEK ENDING FEBRUARY 28, 1925.

Castle & Overton, Inc., Westerner, Rotterdam, 257 bls. wood pulp.
Castle & Overton, ————, Germany, 825 bls. wood pulp.

PORTLAND, MAINE, IMPORTS

WEEK ENDING FEBRUARY 28, 1925.

Poland Paper Co., Georgia, Trieste, 5,205 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING FEBRUARY 28, 1925.

Drinhausen Hollkott Paper Co., Beemsterdyk, Rotterdam, 148 rolls wrapping paper.
Janeway & Carpender, Montana, Antwerp, 5 cs. wall paper.
G. F. Malcolm Co., Devonian, Liverpool, 42 cs. tissue paper.
R. Wilson Paper Co., Kerhonkson, Glasgow, 18 rolls paper.
G. M. Graves & Co., by same, 181 bls. paper stock.
G. W. Miller & Co., by same, 179 bls. paper stock.
J. Cohen & Josephy, Median, Liverpool, 22 bls. rags.
J. Cohen & Josephy, Devonian, Liverpool, 10 bls. rags.
Brown Bros. & Co., by same, 17 bls. thread waste.
Atlantic National Bank, by same, 14 bls. thread waste.
J. T. Lodge & Co., by same, 55 bls. rags.
Baring Bros. & Co., Ltd., by same, 11 bls. rags.
Train Smith & Co., Fluor Spar, London, 43 bls. rags.
Furniss Withy & Co., by same, 105 bls. rags.
F. W. Bird & Son, by same, 199 bls. rags.
Furniss Withy & Co., Fluor Spar, Leith, 20 bls. rags.
T. D. Downing & Co., by same, 8 bls. rags
Brown Bros. & Co., by same, 99 bls. paper stock.
Maurice O'Meara Co., Beemsterdyk, Rotterdam, 65 bls. paper stock.
Train Smith & Co., by same, 149 bls. paper stock.
Atlantic National Bank, by same, 69 bls. cotton waste.
E. Butterworth & Co., Inc., by same, 121 bls. rags.
G. M. Graves & Co., by same, 580 bls. rags.
Second National Bank of Boston, Montana, Antwerp, 226 bls. rags.
Chemical National Bank, by same, 187 bls. rags.
National Shawmut Bank, by same, 45 bls. thread waste.
Old Colony Trust Co, Pacific Maru, Genoa, 9 bls. rags.
Baring Bros. & Co., Ltd., Median, Manchester, 147 bags hide cuttings, 79 bags paper stock, 17 bags cotton waste, 62 bags new cuttings.
Mechanics & Metals National Bank, by same, 112 bls. rags.
Katzenstein & Keene, Inc., by same, 132 bls. rags, 16 bls. bagging.
J. B. Moors Co., by same, 65 bags hide cuttings.
J. B. Moors & Co., Median, Liverpool, 711 bags hide cuttings.
Train Smith & Co., by same, 164 bdls. hide cuttings.
Brown Bros. & Co., by same, 37 bls. thread waste.
Baring Bros. & Co., Ltd., by same, 33 bls. bagging, 20 bls. rags.
National Shawmut Bank, by same, 100 bls. cotton waste.
J. T. Dodge & Co., by same, 92 bls. rags.
M. Salter & Son, by same, 6 bls. rags.
Atlantic National Bank, by same, 44 bls. rags, 6 bls. thread waste.
Bank of America, Linnell, Buenos Aires, 750 bags casein.
English China Clays Sales Corp., Norfolk Maru, Fowey, 3,151 tons China clay.
Moore & Munger, by same, 50 tons china clay.
Atlantic National Bank, Gothia, Fowey, 1,281 tons China clay
J. Richardson & Co., by same, 388 tons China clay.
Morey & Co., Inc., by same, 247 tons China clay.
Paper Makers Importing Co., by same, 769 tons China clay.
Brown Bros. & Co., Median, Liverpool, 67 bls. old rope, 72 coils old rope.
Brown Bros. & Co., Devonian, Liverpool, 64 coils old rope.
Price & Pierce, Ltd., Hedrun, Wallvik, 3,450 bls. sulphite pulp.
Bulkley Dunton & Co., Hedrun, Sundsvall, 4,925 bls. chemical pulp.
M. Gottesman & Co., Inc., Ulla, Stockholm, 6,600 bls. wood pulp.
M. Gottesman & Co., Inc., Brahaholm, Stockholm, 4,000 bls. wood pulp.
Castle & Overton, Inc., Westerner, Rotterdam, 387 bls. wood pulp.
Lagerloef Trading Co., St. Anthony, Kotka, 161 bls. wood pulp boards.

Brazil Imports Principally Kraft Wrapping

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 1, 1925.—While wrapping paper is used extensively in Brazil, imports are confined chiefly to kraft papers as the domestic mills are able to meet the demand for the cheaper grades according to a report received by the Paper Division of the Department of Commerce from American Consul General Gaulin at Rio de Janerio.

W. E. Humphrey on Federal Trade Commission

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 1, 1925.—William E. Humphrey former Representative from the State of Washington has been confirmed as a member of the Federal Trade Commission by the Senate after considerable controversy both in Committee and on the floor of the Senate. Mr. Humphrey succeeds Col. Nelson B. Gaskill who was considered one of the best qualified members of the Commission but who was not renominated by the President.

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Consulting Engineer

Member Am. Soc. C. E.—Am. Soc. M. E.—Eng. Inst., Can.

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New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, March 4, 1925.

A quickening of activity in the paper market has taken place during the past week. The closing days of February witnessed a considerable improvement and paved the way for March to open up under exceedingly favorable conditions. This improvement has continued during the first few days of March in a manner to elate the paper men who are expressing confidence of the results which are to be attained during the month. Orders at this writing are coming in more freely, buyers who have been buying cautiously are showing by their orders that they are giving the future more consideration and inquiries are coming in in greatly increased numbers. This all indicates that Spring is to bring better things to the market and the paper men are redoubling their efforts and intensifying their sales campaigns with a view to making hay while the sun shines. Prices are firm but remain practically without change. In fact prices have remained practically unchanged for an almost unprecedented period. This has been due to the fact that business has not been normal and manufacturers have not deemed it a wise time for revision of the price schedule. As buying is now breaking away from the cautious attitude it is reasonable to expect that prices will before long be revised in such manner as the conditions seem to justify. As most of the prices are, at the present time, generally regarded as fair, it is probable that much business will come through before long to avoid such increases as may be expected.

News print demand keeps steadily to its course, the most dependable factor in the market.

Fine papers did much better during the past week than they have been doing for some time and, even coarse papers which have been lagging behind, showed a substantial pick-up.

Mechanical Pulp

The demand for ground wood costinues to improve and the market conditions are today in very satisfactory shape. Prices are the same as a week ago but are firming up and a change seems imminent.

Chemical Pulp

Fear of the Swedish lockout of pulp workers and paper mill workers is driving a great many orders into the chemical pulp market and the Swedish labor situation is now the most discussed topic in chemical pulp circles. News that the lockout had been postponed until March 16 and that there is hope that the difficulties may be arbitrated before that time was received with satisfaction. It indicates that the trouble may be averted and it at least grants a nearly three weeks' respite. While prices have not yet been effected they are firming up and, if the lockout really materializes, there is little question but that it will cause a sharp advance all along the line. In the meanwhile buyers will be inclined to get into the market with their orders before the blow falls. The impetus given during the past week to the chemical pulp demand shows that this is already being done.

Old Rope and Bagging

There was a very material improvement during the past week both in the demand for old rope and old bagging. Prices are holding to the revision made last week. Demand for foreign Manila rope and roofing bagging is especially good.

Rags

While prices are holding firm in the rag market, the past week saw no change of any sort in the quotations. The chief problem which is today perplexing the dealers is the problem of securing stock to fill orders lying on their desks for stock that is not available. As has already been explained in these columns, collections have been all off for some weeks due to the severe Winter weather which made it impossible for the collectors to adhere to their schedule of collections. For several weeks little stock drifted into the market and, although the weather has since been more favorable, collections have not yet got back to normal. The consequence has been a general shortage of stock while the market is practically destitute of stocks in some of the grades in most demand. As a result there has been a lively scrambling to pick up stock in these particular grades but, in spite of all efforts, many orders are still going unfilled and it is hard to say just when the dealers will be able to meet all their orders. So far this has not caused much of a change in prices but unless stock begins coming in in greater quantities at an early date it may be expected that prices will go up and some of the grades which are at low ebb will probably go to a high mark. It is a good buying time now and the orders which are coming in seem to indicate that the buyers realize it.

Waste Paper

Waste paper is in good demand and orders came through in even larger quantities than formerly during the past week. The trade realizes that the cold weather and the snow has curtailed collections and there has been some fear in certain quarters that a real waste paper famine might result. This has unquestionably hastened forward much business that might otherwise not have materialized at just this time. Prices continue to stand right where they were a few weeks ago.

A. D. Little Heads Exposition Committee

Arthur D. Little, president of Arthur D. Little, Inc., of Boston, was elected to succeed Charles H. Herty as chairman of the Advisory Committee of the Exposition of Chemical Industries at a meeting of the Committee held at the Chemists Club, New York, on February 24th. Dr. Arthur D. Little is one of the most widely-known chemical engineers in the United States and one of the pioneers in the modern American chemical industry. He is president of one of the largest research and engineering organizations in the world, the founding of which dates back to 1886. Dr. Charles H. Herty, who resigned from the chairmanship of the Advisory Committee owing to the pressure of other duties, is president of the Synthetic Organic Chemical Manufacturers Association of the United States. He has been chairman of the Committee for ten years, serving since the inception of the Chemical Exposition in 1915. He remains a member of the Committee.

Dr. Little has been a member of the Exposition Committee for the past ten years. This, the Tenth Exposition of Chemical Industries, will be held at the Grand Central Palace, New York, September 28th to October 3rd, 1925.

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Pine Tree Pulp Company

Groundwood

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, March 4, 1925.

Another week without significant change is the story of the past week in the chemical market. The market is holding to an even balance, prices are firm, demand for most of the items in the chemical list is satisfactory and, if any thing, the tone of the market indicates betterments in certain directions. Orders are coming in a trifle better and much of the buying is of a more anticipatory character than has been endulged in recently. Dissatisfaction over some of the prices has not entirely died away, however, and some of the commodities are being retarded in their demand by a lukewarmness attributed to the fact that many buyers still believe that the prices should come down. At the present time the demand is running about neck and neck with production. Stock is not accumulating enough to cause any worry and supplies available at this writing are of about the same amount on hand for some weeks. Production, however, is better than it was at that time so this really shows that there has been improvement and that stock is now moving in better shape. What business is being transacted today is, for the most part, healthy business. Concession making is not being carried on on the wholesale scale which was in evidence as recently as a month ago. There is no great boom on in any of the great chemical-using trades or industries but from every chemical-buying source good orders are coming which shows that a fair prosperity is quite evently distributed in practically all lines. At this writing figures are not available but it is known that the chemical sales for February have not been quite up to expectations but they have been near enough the mark so that the chemical men are not discouraged and are looking for a considerable improvement during March.

BLANC FIXE.—Blanc fixe followed up the excellent business of the previous week by another week of similarly good business. Orders are coming through a little more freely and that may mean that the consumers who have been holding back because of dissatisfaction over the price are gradually making up their minds that the price is not coming down and that there is no reason in waiting longer to place their orders. If that is true action in blanc fixe should be considerably accelerated soon. But this theory may be far fetched and the better business of the past two weeks may simply indicate that some buyers have run too close to the margin and have been forced to buy. If the latter is the case, blanc fixe will probably enjoy a little flurry and then suffer something of a reaction. From $60 to $70 a ton is still being asked for the pulp and from $75 to $90 a ton for the powder.

BLEACHING POWDER.—Bleaching powder is now coming along very nicely. A really encouraging improvement set in week before last and that is still continuing. Business is coming through in good volume and the tonnage withdrawals are increasing constantly. Manufacturers are apparently determined to keep the price at least as high as it is at present and the market is apparently gracefully accepting their dictate so that buyers are getting back to their normal buying. The prices are firm and it is more reasonable to believe that when a change comes it will be a slight advance rather than a reduction of any sort. The quotation is still from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—At this time caustic soda is holding a very conspicuous position in the market. Orders have been coming through in great numbers and for large volume and there is every prospect that this will continue for an indefinite period. The price is accepted as very favorable and buying is being done for a considerable period ahead. The price is still from 3.10 to 3.15 cents a pound and is very firm.

CASEIN.—The last week in the case of casein was practically a repetition of the week before. The demand is very good but ceasein does not seem to make any headway toward further improvement. The demand is good enough, however, so that the casein men are well satisfied to have it run along as it has been doing. It is still quoted at from 12 to 13 cents a pound.

CHINA CLAY.—China clay did a little better during the past week. There is a better buying disposition in the market and while the demand is not what it should be there is every indication of an early improvement. The imported grades are quoted at from $16 to $20 a ton and the domestic grades at from $12 to $15 a ton.

CHLORINE.—In spite of the fact that chlorine has been lagging and conditions are not such as to encourage anything very different, there was some betterment here during the week. Chlorine is unquestionably suffering because of the dissatisfaction over the price. Buying will probably not become any too generous as long as the price stands where it is and from what can be learned there is very little likelihood that the manufacturers will see fit to come down on the price for some time at any rate. It is quoted at from 4.50 to 7.00 cents a pound in tanks.

ROSIN.—The week saw no further advance in the price of rosin but the market is firm and some of the leading rosin buying sources are sending through some splendid business from day to day. The tone of the market is thoroughly healthy and the future bears a favorable aspect. The present price is from $6.25 to $6.45 at the naval store centers.

SALT CAKE.—Salt cake seems to be getting slowly but surely better all the time and last week's business was particularly good. The price has not bulged from $17 to $20 a ton.

SODA ASH.—The week was a good one for soda ash which has been showing commendable improvement recently. Buying is being done on an exceedingly liberal scale and the orders which are coming to the market now cover a considerable period ahead. The price remains 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—Sulphate of alumina is also continuing on the road of improvement. After several weeks of steady betterment there is no indication of a let-up, the domestic grade being especially active at this time. It is quoted at from 1.40 to 1.45 cents a pound for the commercial grade at the Eastern works and from 2.10 to 2.25 cents a pound for the iron free.

SULPHUR.—Sulphur holds consistently to its course with stock moving in a uniform manner and with the price holding at from $18 to $19 a ton.

TALC.—Talc is doing better each week now and is getting into very satisfactory shape, with brighter prospects than have confronted it for some time. The price is from $16 to $17 a ton.

Make Survey of Kaolin Industry

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 4, 1925.—A preliminary survey of the kaolin industry has been made by experts of the Tariff Commission and the report has been sent to the advisory committee of the commission prior to a recommendation being made to the Commission itself.

Domestic clay producers filed an application with the Commission some time ago asking an increase in the tariff on clay. Before any definite action is taken however, the Commission must decide whether the preliminary survey shows that the application is worthy of further investigation.

Request for Simplification of Wall Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 4, 1925.—The Simplified Practice Division of the Department of Commerce has received a request for simplification of wall paper. In connection with this request the Division has communicated with the Wall Paper Manufacturers Association as to whether or not such a step is desired by the industry. No response has yet been received.

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Market Quotations

Quoted by Hepburn & Co., No. 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Abitibi Power and Paper, Gen. 6s 1940	99	102*
Advance Bag and Paper, 7s 1943	97	100*
Aroostook Pulp and Paper, 6s 1925	99	...
Bastrop Pulp and Paper, 7½s 1932	104	108*
Brompton Pulp and Paper, 6s 1927	93	95
Beaver Board, 8s 1933	87	89
Bedford Pulp and Paper, 6½s 1942	98	...
Berkshire Hills Paper Co., 8s 1941	...	80
Beaver Board, N. Y. Curb, 8s 1933	87	89
Beaver Products Corp., 7½s 1942	102	104
Belgo Canadian Paper, 6s 1943	97	99
Brown Paper Co., 8s 1931	102	105*
Berlin Mills, 5s 1931	99	...
Bryant Paper Co., 6s 1942	97	100
Brown Company Serial, 6s 1925-43	97	100
Central Paper, 6½s 1925-42	90	95
Cape Breton Pulp and Paper, 6s 1932	98	102
Carthage Sulphite Pulp and Paper, 8s 1941	45	55
Champion Coated Paper Co., 6s 1924-34	...	102
Champion Fibre Co. Notes, 8s 1930	101	...
Cherry River Paper, 5s 1929	97	100*
Chicoutimi Pulp Co., 6s 1942	63	...
Donnaconna Paper Co., Ltd., 6s 1940	98	100
Eddy Paper, 7s 1931	96	...
Eagle Paper, 6½s 1932	96	100
Escanaba Paper, 6s 1933	84	88
Fox River Paper, 7s 1931	100	...
Fort Orange Paper Co, 7s 1942	90	...
Eddy Paper Co., 7½s 1931	94	98
Gilbert Paper Co., 7s 1927	96	...
Gilbert Paper Co., 6½s 1923-29	101	102*
Hammermill Paper Co., 6s 1930-39	98	...
Hercule Corp'n, 8s 1936	98	101
Hummell, Ross Fibre Corp., 7s 1925	90	...
Jessup & Moore Paper Co., 6s 1939	93	97
Kenmore Pulp and Paper Co., 6s 1937	89	...
Lake Superior Pulp and Paper, 6s 1941	102	...
Mattagami Pulp and Paper, 6s 1939	78	40
Marinette & Menominee, 7½s 1936	103	105
Mengel Company, 7s 1934	100	103
National Paper and Type, 6s 1947	96	99*
Oswego Falls Corp., 8s 1942	101	103*
Orono Pulp and Paper, 5s 1941	93	96*
Orono Pulp and Paper, 6s 1943	97	100*
Oxford Paper Co., 6s 1947	99	...
Parsons Pulp & Lumber 1st 7s 1928	92	...
Paterson Parchment Paper, 5½s 1927-28	98	101
Paterson Parchment, 6s 1938	97	99
Parker, Young Co., 6½s 1944	92	96
Price Bros. & Co., Ltd., 6s 1943	99	101
Provincial Paper Mills, Ltd., 6s 1940	97	...
Riordon Co., Series A, 8s 1940	103	106
Riordan Paper, 6s 1924	91	94
Riordan Pulp and Paper, Ltd., 6s, 1929	24	28
River Raisin Paper, 8s 1936	104	106
St. Regis Paper, 6½s, 1929-35	97	102
Smith (Howard) Paper Mills, 7s 1941	93	95
Smith (Howard) Paper Mills, 6s 1934	94	...
St. Croix Paper, 5s 1923-37	95	...
Stevens & Thomson Paper, 6s 1942	86	90
Spanish River Pulp and Paper, 6s 1931	105	108
Spanish River Pulp and Paper, Gen 8s 1941	107	109
Ticonderoga Pulp and Paper Co., 6s, 1940	91	95
Ticonderoga Pulp & Paper 1-5, 1930	88	93
Whittaker Paper, 1st 7s 1942	94	98
Watab Paper Co., 6½s 1942	99	102
Waterway Paper Products, 7s 1924-27	95	100
Wayagamack Pulp and Paper, Ltd., 6s 1951	85	87

STOCKS	BID	ASKED
Abitibi Power and Paper, Com	63	66
Abitibi Power and Paper, Pfd	104	...
Advance Bag and Paper, Com	8	12*
Advance Bag and Paper, Pfd	70	75*
Beaver Board, Com	5	8
Beaver Board, Pfd	35	40
Bryant Paper, Cap	12	...
Bryant Paper, Pfd	9	...
Brompton Pulp and Paper, Cap	29	31
Chicago Mill & Lumber Co., Com	63	...
Chicago Mill & Lumber Co., Pfd	98	101
Crown Williamette, Com	93	98*
Crown Williamette, 7% A, Pfd	98	SW
Donnaconna Paper, Pfd	95	100
Great Northern Paper, Cap	220	230
Howard Smith Paper Co., Com	22	23
Howard Smith Paper Co., Pfd	70	75
Jessup & Moore Paper, Pfd	74	78
International Paper Co., Com	56	57
International Paper Co., Pfd	74	76
Mengel Company, Com	37	40
Mengel Company, Pfd	76	...
Oxford Papers, Com	93	97
Oxford Paper Co., Pfd	98	...
Provincial Paper Co., Com	94	98
Provincial Paper Co., Pfd	98	100
Price Brothers, Cap	...	39
St. Croix Paper	183	215
St. Maurice Paper Co., Cap	83	88
St. Regis Paper Co., Cap	...	28
Smith (Howard) Paper Co., Ltd., Com	29	31
Smith (Howard) Paper Co., Ltd., Pfd	83	...
Spanish River Pulp and Paper, Com	107	109
Spanish River Pulp and Paper, Pfd	121	...
Ticonderoga Pulp and Paper, Cap	145	...
West Virginia Pulp and Paper, Cap	44	47
West Virginia Pulp & Paper, Pfd	85	...
Whittaker Paper, Com	12	15
Whittaker Paper, Pfd	44	46

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@32.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.50	@ 3.90
Rolls, transit	3.75	@ 4.25
Sheets	4.00	@ 4.25
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	7.00	@ 9.75
M. F.	6.25	@ 8.75
Coated and Enamel	8.00	@15.00
Lithograph	9.00	@14.00
Tissues—		
White No. 1	.70	@ .90
Colored	1.00	@ 2.25
White No. 2	.70	@ .80
Anti-Tarnish	1.40	@ 2.30
Kraft	.90	@ 1.00
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	5.50	@ 6.25
No. 2 Domestic	5.00	@ 5.50
Imported	5.50	@ 5.75
Manila—		
No. 1 Jute	9.25	@ 9.50
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.00
Fibre Papers—		
No. 1 Fibre	5.50	@ 6.00
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.50	@ 2.75
S. Screening	3.25	@ 3.75
Card Middler	4.00	@ 5.00
Boards—per ton—		
News	45.00	@47.50
Straw	50.00	@55.00
Chip	45.00	@47.50
Binders' Boards	75.00	@80.00
Sgl. Mla. Ll. Chip	60.00	@62.50
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.80	@ .90
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported	32.00	@38.00

(F. o. b. Mill)

No. 1 Domestic	30.00	@35.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.85	@ 4.50
Easy Bleaching	2.90	@ 3.25
No. 1 strong unbleached	2.75	@ 3.25
No. 2 strong unbleached	2.60	@ 3.00
No. 1 Kraft	2.75	@ 3.00
Sulphate—		
Bleached	3.50	@ 3.65

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.75	@ 4.50
Easy Bleaching Sulphite	2.90	@ 3.25
News Sulphite	2.45	@ 2.75
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.70	@ 3.50
Soda Bleached	4.00	@ 4.25

Domestic Rags

New Rags

Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	14.50	@15.50
New White, No. 2	8.50	@10.50
Silesias No. 1	10.50	@11.50
New Unbleached	13.50	@14.50
Washables	6.50	@ 9.25
Fancy	10.00	@10.50
Blue Overall	10.50	@11.50
New Blue Prints	7.50	@ 8.50
New Soft Blacks	5.75	@ 6.20
Mixed Khaki Cuttings	5.75	@ 6.50
Pink Corset Cuttings	10.50	@11.00
Pink Muslin	10.25	@10.75
New Light Seconds	3.25	@ 3.50
O. D. Khaki Cuttings	6.50	@ 7.50
Men's Corduroy	6.00	@ 6.75
New Mixed Blacks	4.00	@ 5.00

Old Rags

White, No. 1—		
Repacked	8.00	@ 9.00
Miscellaneous	6.50	@ 7.00
White, No. 2—		
Repacked	4.75	@ 5.25
Miscellaneous	4.00	@ 4.50
St. Soiled, White	3.25	@ 3.75
Thirds and Blues—		
Repacked	4.00	@ 4.25
Miscellaneous	3.25	@ 3.50
Black Stockings	4.00	@ 4.50
Roofing Rags—		
Cloth Strippings	3.15	@ 3.25
No. 1	3.15	@ 3.25
No. 2	2.85	@ 3.05
No. 3	2.00	@ 2.25
No. 4	2.75	@ 2.85
No. 5A	1.80	@1.50

Foreign Rags

New Light Silesias	9.50	@10.50
Light Flannelettes	11.00	@12.00
Unbl'chd Cottons	13.50	@14.50
New White Cuttings	14.00	@15.00
New Light Oxfords	10.00	@11.00
New Light Prints	9.00	@10.00
New Mixed Cuttings	4.25	@ 4.75
New Dark Cuttings	3.75	@ 4.25
No. 1 White Linens	10.50	@11.50
No. 2 White Linens	7.50	@ 8.50
No. 3 White Linens	6.25	@ 6.75
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.75	@ 5.50
Ord. Light Prints	4.25	@ 4.75
Med. Light Prints	3.75	@ 4.25
Dutch Blue Cottons	4.50	@ 5.00
Ger. Blue Cottons	4.25	@ 4.50
Ger. Blue Linens	4.50	@ 5.00
Checks and Blues	3.75	@ 4.00
Linsay Garments	2.80	@ 2.90
Dark Cottons	2.70	@ 2.80
Shoppery	2.60	@ 2.70
French Blues	4.25	@ 4.75

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	3.00	@ 3.10
Domestic	3.15	@ 3.25
Wool, Tares, light	2.80	@ 2.90
Wool, Tares, heavy	2.85	@ 2.95
Bright, Bagging	2.70	@ 2.80
Mixed Bagging	2.30	@ 2.40
Sound Bagging	2.50	@ 2.60
Roofing Bagging	2.10	@ 2.20
Manila Rope—		
Foreign	6.25	@ 6.75
Domestic	6.50	@ 7.00
New Bu. Cut	3.50	@ 4.00
Hessian Jute Threads—		
Foreign	4.00	@ 4.25
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.60	@ 3.90
Hard, White, No. 2	3.25	@ 3.50
Soft, White, No. 1	2.90	@ 3.15
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag	1.45	@ 1.55
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.25	@ 1.35
Solid Book Ledger	1.80	@ 1.90
Ledger Stock	1.60	@ 1.70
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.45	@ 2.60
New Cut. No. 1	1.75	@ 2.00
Extra No. 1 old	1.40	@ 1.50
Print	1.20	@ 1.30
Container Board	1.00	@ 1.10
Bogus Wrapper	1.00	@ 1.10
Old Krafts Machine compressed bales	2.05	@ 2.15
News—		
No. 1 White News	1.95	@ 2.10
Strictly Overissue	1.05	@ 1.15
Strictly Folded	.95	@ 1.05
No. 1 Mixed Paper	.65	@ .75
Common Paper	.45	@ .55

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.43	@ .48
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.56	@ .61

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Finished Jute—			
Dark, 18 basis	.30	@	.31
Light, 18 basis	.28	@	.30
Jute Wrapping, 3-6 Ply—			
No. 1	.20	@	.23
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger.	.15	@	.17
Fine Tube Yarn—			
5-ply and larger.	.20	@	.28
4-ply	.21	@	.24
3-ply	.22	@	.25
Unfinished India—			
Basis	.14	@	.15
Paper Makers' Twine			
Balls	.12	@	.13
Box Twine, 2-3 ply	.14	@	.15
Jute Rope	.20	@	.40
Amer. Hemp, 6	.30	@	.32
Sisal Hay Rope—			
No. 1 Basis	.14	@	.16
No. 2 Basis	.10	@	.12
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.18	@	.19

CHICAGO

Paper

F. o. b. Mill

All Rag Bond	35	@	40
No. 1 Rag Bond	25	@	35
No. 2 Rag Bond	14	@	25
Water Marked Sulphite	9	@	12
Sulphite Bond	7	@	10¼
Sulphite Ledger	9½	@	12
Superfine Writing	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book	5½	@	7½
No. 1 S. & S. C. Book	6¼	@	7¼
Coated Book	8	@	10
Coated Label	8	@	10
News—Rolls, mill	3½	@	4½
News—Sheets, mill	3¾	@	4¾
No. 1 Manila	4½	@	5½
No. 1 Fibre	4½	@	5¼
No. 2 Manila	3¾	@	4¼
Butchers' Manila	4	@	4½
No. 1 Kraft	5¾	@	6¼
No. 2 Kraft	4.75	@	5.50
Wood Tag Boards	4¼	@	6
Sulphite Screenings	3.00	@	3.25
Manila Tissue, 24x36 sheet	7½	@	8
White Tissue, 20x30 sheet	7	@	7¼
Boards, per ton—			
Plain Chip	50.00	@	52.50
Solid News	52.50	@	55.00
Manila Line Chip	62.50	@	65.00
Container Lined—			
85 Test	72.50	@	75.00
100 Test	77.50	@	80.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.40	@	3.50
White Envel. Cuttings	3.40	@	3.50
No. 1 Soft Shav.	3.20	@	3.25
No. 1 Mixed	1.60	@	1.70
No. 2 Mixed	1.35	@	1.40
Ledger and Writings	1.60	@	1.65
Solid Books	1.55	@	1.60
No. 1 Light Books	1.15	@	1.20
Blanks	2.10	@	2.15
Kraft	2.15	@	2.25
New Kraft Cuts	2.40	@	2.50
Manila Envelope Cuttings	2.50	@	2.60
Ex. No. 1 Manila	2.35	@	2.40
Print Manila	1.05	@	1.10
Folded News (over-issue)	.85	@	.95
Old Newspapers—			
No. 1	.80	@	.85
No. 2	.75	@	.77½
Mixed Papers—			
No. 1	.75	@	.77½
No. 2	.70	@	—
Straw Clippings	.85	@	.90
Binders' Clippings	.80	@	.85
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	—	@	48.50
No. 2	—	@	46.50
No. 3	—	@	44.50
No. 4	—	@	38.50

BOSTON

Paper

Ledgers—			
Sulphite	.08¼	@	.18
Rag content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.08¼	@	.14
Rag Content	.17	@	.45
All Rag	.36½	@	.51
Writings	.08½	@	.20
Superfines	.20	@	.48
News	.04	@	.06½
Book, M. F.	.06¼	@	.10¾
Book, Super	.07¼	@	.11
Book, Coated	.09	@	.20
Coated Litho	.09½	@	.15
Label	.09½	@	.15
Jute Manila No. 1	.12	@	.13
Manila, Sul. No. 1	.05	@	.06
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.05¾	@	.05½
Common Bogus	.03½	@	.04
Straw Board	—	@	50.00
News Board	—	@	52.50
Chip Board	—	@	50.00
Single Manila Pulp lined board	60.00	@	65.00
Single White, patent coated board	75.00	@	85.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	75.00	@	85.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	4.00	@	4.25
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White	.04½	@	—
No. 2 Soft White	.03¼	@	—
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.00	@	2.25
Writing Paper	—	@	1.70
No. 1 Books, Heavy	1.75	@	1.85
No. 1 Books, Light	—	@	1.50
No. 1 New Manila	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.00	@	2.25
Overissue News	1.00	@	1.20
Old Newspapers	.70	@	.75
No. 1 Mixed Paper	.60	@	.65
Box Board, Chip	.60	@	.65

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	—	@	3.00
Domestic	—	@	3.00
Manila Rope	6.00	@	6.50
Mixed Rope	1.50	@	1.62½
Scrap burlaps	—	@	3.00
Wool Tares, heavy	—	@	3.00
Mixed Strings	—	@	2.25
New Burlap Cuttings	—	@	3.75

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.15½	@	.15¾
Silesias, No. 1	.11	@	—
New Unbleached	.14¼	@	.14½
Washable	.07¾	@	.08
Fancy	.10½	@	—
Cottons—According to Grades—Blue—			
Blue overalls	.12½	@	—
New Black, soft	.07	@	—
Khaki Cuttings	.07	@	—
Corduroy	.04	@	.04½
New Canvas	.12	@	.12½

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1	10.00	@	—
Repacked	9.50	@	—
Miscellaneous	8.50	@	—
White No. 2—			
Repacked	6.50	@	—
Miscellaneous	5.25	@	—
Thirds and Blues—			
Repacked	5.00	@	—
Miscellaneous	3.50	@	—
Roofing Stock—			
No. 1	3.00	@	—
No. 2	3.00	@	—
No. 3	2.50	@	—
No. 4	2.00	@	—

PHILADELPHIA

Paper

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06½	@	.07½
Book, S. S. & C.	.06½	@	.08
Book, Coated	.11½	@	.17
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila No. 2	.04	@	.04½
No. 2 Kraft	.05¼	@	.05¾
No. 1 Kraft	.06¼	@	—
Common Bogus	.02¾	@	—
Straw Board	55.00	@	60.00
News Board	50.00	@	—
Chip Board	50.00	@	—
Wood Pulp Board	4.50	@	5.00

(Carload Lots)

Binder Boards—			
Per ton	75.00	@	80.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	1.75	@	1.85
Domestic	1.60	@	1.65
Manila Rope	5.75	@	6.00
Sisal Rope	2.50	@	—
Mixed Rope	1.25	@	—
Scrap Burlaps	1.75	@	1.80
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.00	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.75	@	—

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.65	@	3.70
No. 2 Hard White	3.25	@	3.40
No. 1 Soft White	2.90	@	3.00
No. 2 Soft White	2.05	@	2.25
No. 1 Mixed	—	@	1.80
No. 2 Mixed	1.25	@	1.30
Solid Ledger Stock	1.75	@	1.90
Writing Paper	1.50	@	1.75
No. 1 Books, heavy	1.50	@	1.60
No. 2 Books, light	1.15	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.75
Container Manila	1.15	@	1.20
Old Kraft	2.25	@	2.50
Overissue News	1.05	@	1.10
Old Newspaper	.80	@	.90
No. 1 Mixed Paper	.75	@	.80
Common Paper	.60	@	.70
Straw Board, Chip	.65	@	.70
Binders Bd., Chip	.75	@	.80

Domestic Rags—New.

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.12½	@	.13
New White, No. 2	.06½	@	—
Silesias, No. 1	.08	@	.08¼
New Unbleached	.12	@	.12½
Washable	.05½	@	.05¾
Fancy	.07	@	.07¼
Cottons—according to grades—			
Blue Overall	.08¼	@	.09
New Blue	.04	@	.04½
New Black Soft	.06	@	.06¼
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.09	@	.09½
New Black Mixed	.05	@	.05¼

Old

White, No. 1—			
Repacked	7.00	@	7.25
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05½	@	.05¾
Miscellaneous	.05	@	.05¼
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous	3.15	@	3.25
Black Stockings	4.50	@	5.00
Roofing Stock—			
No. 1	2.25	@	2.35
No. 2	2.15	@	2.25
No. 3	1.25	@	1.35
No. 4	2.10	@	2.20
No. 5A	1.40	@	—
B	1.25		nominal
C	1.15		nominal

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11½	@	.12½
Light tinted	.12½	@	.13½
Dark tinted	.14	@	.15
Ledgers (sulphite)	—	@	.13
Ledgers No. 1	34	@	
Ledgers No. 2	26	@	
Writing	.09½	@	
Writing S. C.	.10	@	
News, f. o. b. Mills—			
Rolls (carloads)	3.65	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	8.25	@	—
No. 2 M. F. (carloads)	7.95	@	—
No. 3 M. F. (carloads)	7.25	@	—
No. 1 S. C. (carloads)	8.75	@	—
No. 2 S. C. (carloads)	8.25	@	—
No. 3 S. C. (carloads)	7.75	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	30.00	@	32.00
Sulphite easy bleaching	60.00	@	65.00
Sulphite news grade	55.00	@	60.00
Sulphite, bleached	80.00	@	—
Sulphate	65.00	@	67.50

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut.	3.60	@	—
Soft White Book shavings	3.25	@	—
White Blk, News	1.70	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.35	@	—
Light and Crumpled Book Stock	1.20	@	—
Ledgers and Writings	1.60	@	—
Solid Ledgers	1.60	@	—
Manilas—			
New Manila Cut	—	@	1.60
Printed Manilas	1.10	@	—
Kraft	2.15	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News	.90	@	—
No. 1 Mixed Papers	.70	@	—

Domestic Rags—

Price to mills, f. o. b. Toronto

	Per lb.		
No. 1 White shirt cuttings	.15	@	.15¼
No. 2 White shirt cuttings	.07½	@	.08
Fancy shirt cuttings	.09¼	@	.10
No. 1 Old Whites	—	@	—
Third and blues	.05½	@	.05¼